AN EXPLORATION OF MIDWIFERY PRACTICE VIEWED THROUGH A SOCIAL CONSTRUCTIONISM LENS IN ORDER TO GAIN AN UNDERSTANDING OF HOW MIDWIVES PROVIDE CARE TO PREGNANT WOMEN WHO ARE OBESE

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Abstract

To enter pregnancy whilst obese carries risk for both mother and baby but obesity rates continue to rise. Community midwives are now the lead carers for all pregnant women and will inevitably encounter women whose health is at risk due to being obese. This qualitative study has explored how midwives construct their practice when delivering care and advice to women who live with a raised BMI≥30kg/m² and what it means for them to do so.

Thirteen in-depth interviews were conducted with practicing community midwives in South East Scotland. Participants were invited to complete reflective diaries. Interviews took place between January and May 2018. Interviews were audio recorded and then transcribed verbatim. Data were analysed thematically using a stepwise approach, the software package NVivo 10 was used to assist in this process. Three main themes emerged – 'The situational context of practice', 'Constructing relationships and partnerships with women' and 'Midwives as public health agents'.

Findings suggest that both the situational context and the role of community midwives is complex. Midwives appear to construct a unique approach to antenatal care as they provide care to women structures that do not appear to be flexible. They appear to 'move' between the paradigms of traditional midwifery practice and that of obstetric medicine and simultaneously promote normality and manage risk, in so doing they construct a unique pattern of practice. The public health agenda competes for time during appointments with midwives being expected to deliver voluminous information to women leaving little time to develop woman-focused care. Midwives rely on clinical protocols to open dialogue pertaining to obesity and its risks.

Midwives could develop more personalised care schedules in partnership with women, ensuring that the woman's voice is heard and that her needs are met. Practice may be strengthened by equipping midwives with enhanced consultation skills, enabling them to raise sensitive issues. Exploring alternative ways to address public health components may also facilitate better use of time, allowing midwives to ensure the antenatal appointment is woman-focused.

Keywords – Midwives, pregnancy, obesity, public health

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1.1 Introduction

This chapter introduces the topic pertaining to being overweight or obese during pregnancy, the potential risks and effects it has on mothers and their babies and the potentially long and shortterm effects it may have on the life of the child during his or her lifetime. Rationale is given for undertaking academic research pertaining to professional midwifery practice in the context of raising and discussing the sensitive and complex issues that surround discussing body weight with women who present with BMI≥30kg/m². An overview of the scope and context of midwifery practice is also provided in this chapter explaining the situational context of practice in relation to other professional groups.

1.2 Demographic evidence of obesity in Scotland

The definition of obesity according to the World Health Organisation (WHO) (2018) is having a Body Mass Index (BMI) of 30kg/m² or more. In 2015 the WHO published findings stating that 39% of adults worldwide were thought to be obese. Obesity carries health risks for nonpregnant individuals such as hypertension and cardiac disease, type 2 diabetes, depression and anxiety and osteoarthritic disorders (Scottish Intercollegiate Guidelines Network 2010) (SIGN). This is now a serious concern about the pressure that will be placed upon maternity services within the UK (Herring et al. 2010; Russell et al. 2010; Furness et al. 2011; Heslehurst et al. 2011; Heslehurst et al. 2013; Foster et al. 2014). McGivernon et al. (2014, p.29) have predicted that '30% of 21-30 year old and 47% of 31-40 year old women are estimated to be obese by 2050'. Inevitably, therefore, women who have a Body Mass Index (BMI) ≥30kg/m² and who are of childbearing age will continue to present for pregnancy care in the UK. The risks of being

overweight or obese during pregnancy are now well understood (MBBRACE_UK 2014 and MBBRACE_UK 2018). They include miscarriage, fetal abnormality, gestational diabetes (GDM), raised blood pressure and pre-eclampsia, prolonged pregnancy, increased risk of caesarean section, venous thromboembolitic disease (VTE), wound infections and difficulty with breastfeeding and maternal death (Denison et al. 2008; Denison & Chiswick 2011; Keely et al. 2015; MBBRACE – UK 2014, MBBRACE_UK 2018; Porteous et al. 2014; Stirrat & Reynolds 2014). Babies are also at increased risk of injury such as brachial plexus injury or fractures of the clavicle during delivery where the mother is either overweight or obese herself and there is a greater risk of the baby being admitted to the Neonatal Unit (NNU) (Drake & Reynolds 2010; Stirrat & Reynolds 2014). Babies born to obese women are at risk of becoming macrosomic[1] and if the mother has developed gestational diabetes mellitus (GDM), they are at risk of developing hypoglycaemia in the early neonatal period (Drake & Reynolds 2010; Stirrat & Reynolds 2014). In addition, Drake & Reynolds (2010) and Catalano et al (2009) have identified that there is an increased risk of offspring becoming obese in adult life where the mother is herself obese. This means that future generations may also experience the incumbent risks of obesity and sub-optimal health. This will inevitably impact upon the future health of individuals and on the future costs of healthcare.

1.3 Demographic Evidence of the 'Obesity Problem

The Scottish Public Health Observatory (Scot PHO) (2007) suggested that Scottish obesity rates are now only second to those in the USA. The Foresight Report (2010), published by the UK Government Office for Sciences has also suggested that by 2050 Britain may be a mainly obese society. More recently, in their summary of key points with respect to obesity ScotPHO

[1] A baby is considered to be macrosomic if he/she weighs more than 4.5kg at birth. These babies are pre-disposed to birth injury such as shoulder dystocia. Asphyxia is more common in these infants than in normal weight babies increasing the risk of fetal or neonatal death (Fraser & Cooper 2008).

(2016) stated that 28% of the Scottish population was obese in 2014 and that the prevalence was greater in women than in men, 29% compared to 26%.

Given the health risks associated with being overweight or obese and the concerning forecasts about the predicted rise in obesity rates locally, nationally and internationally, it appears that it will be important for healthcare professionals to be adequately equipped and prepared to engage in meaningful dialogue with individuals who present for care and who live with raised BMI ≥30kg/m². This, it can be argued is a vital aspect of healthcare if individuals are to be informed that their health may be at risk as a result of their weight and to alert them as to what risks they may be exposed to. This is important, especially when one considers that in Scotland in the year ending March 2018 13,427 (26.2%) of women who presented for maternity care were overweight and 11,604 (22.7%) were obese (Information Services Division, NHS Scotland 2018). These two groups represent almost half of all women who presented for maternity care in Scotland. There is also recognition that offspring born to women with BMI≥30kg/m² may be at risk of ongoing health risks in adulthood (Stirrat & Reynolds 2014). Midwives are key players in delivering health messages to pregnant women because they are now the lead carers in maternity care (Pathways for maternity care 2009). Currently it is not clear if or how community midwives discuss these complex issues with women during antenatal appointments or if these issues are discussed, how much detail is gone into during antenatal appointments.

1.4 Contextualising Antenatal Care

In the South East of Scotland, women who have had a positive pregnancy test are advised to contact their local community midwife directly in order to arrange a first or *booking* appointment. Antenatal appointments are conducted in clinics local to the women's homes, usually the GP practice in order reduce inconvenience for the woman and her family. This booking appointment is the first of seven or eight appointments a pregnant woman can expect to have

during a normally developing pregnancy. The midwives strive to ensure that continuity of care and carer is provided throughout the antenatal course; a summary of the antenatal care schedule can be seen in Appendix 1. This antenatal care schedule was developed over one hundred years ago in response to the rising maternal and infant mortality rates (Savage 2011). This pattern of care has not altered a great deal since its inception and it still appears to be acceptable to women (The Best Start 2017).

Community midwives who practice in South East Scotland are based in various health centres and surgeries and they practice in teams, ensuring that every woman in every geographical area has access to midwifery services. Each midwife provides antenatal services in the geographical areas in which he/she is based and they strive to maintain continuity of care for each women. During the antenatal course, the community midwife is responsible for taking a holistic approach to monitoring the woman and her unborn baby ensuring her psychological and physical wellbeing, making referrals to appropriate specialists when or if required. Community midwifery practice in the early 21st century is now expected to include aspects of health education, health promotion and public health issues and include these during antenatal appointments (Sanders et al. 2016). Postnatally the midwife has a role to play in supporting the woman and her family during her transition to motherhood and provides daily visits to the woman's home to ensure all is well for families. Midwives are also expected to incorporate public health and health promotion issues such as contraception and ongoing breastfeeding support into postnatal care too. Most women and their babies are discharged from midwifery care on day ten following delivery however, if necessary the midwife will still attend the family if there is an indication and will continue giving support until day twenty-eight (The Best Start 2017). During this time, midwives aim to develop a good professional relationship with the woman and her family. It seems then, that the midwife is in an optimal position to provide

information about weight management, diet and nutrition when women present with a BMI of 30-39.9kg/m².

1.5 Situational Context of Midwifery Practice

Traditionally, midwifery practice is underpinned by a philosophy of normality and a belief that the woman's body will adapt to the physiological changes of pregnancy and ultimately deliver a healthy baby with little or no need for medical intervention (Davis Floyd 2011; Scamell and Alaszewski 2012). Women attend antenatal appointments, not because they have ill health but to have their (normal) pregnancy monitored. One of the principal facets of the antenatal role of the midwife is health promoter and health advisor (Dunkley-Bent 2004). However, it appears that midwives in the 21st century find themselves at an interface between two paradigms, one of promoting normality and instilling confidence in women to deliver their babies with little intervention and one of identifying and managing risk, which may be more akin to an obstetric medical model of care (Scamell 2016). Organisations such as the WHO, the Royal College of Obstetricians and Gynaecologists, National Institute for Clinical Excellence (NICE) all produce policy documents with respect to maternity care following detailed national studies into maternal mortality and morbidity. Other driver documents such as the MBBRACE_UK reports (2014; 2018) also publish data that informs policy and guidance in an effort to support practice and reduce the risk of any pregnant woman suffering both short and long-term morbidities or even dying in childbirth. These guidelines are often prescriptive and may risk conflating the needs of the woman to a list of checklists and risk factors irrespective of her individual wishes and needs. The RCOG (2018) guideline on the care of obese pregnant women for example, is explicit in explaining what procedures and plans should be offered and put in place for pregnant women who live with a BMI≥30kg/m². It is also explicit in saying that the women themselves should receive information and advice about the risks to their own health to that of their babies

during pregnancy as well as receiving advice about their lifestyle. No guidance is given in this document however, as to *how* these messages should be delivered by midwives.

Whilst midwives may be accepted as the experts in providing care to women who have 'normal' and 'low risk' pregnancies, in this early part of the 21st century, they appear to be expected to identify and manage the care of women who find themselves in 'high risk' categories. This therefore may be impacting upon the traditional role of the midwife and be instrumental in allowing the role to diversify and expand, 'morphing' it from one of promoting normality to one of managing risk for some susceptible women. This change of focus in practice therefore, may require enhanced skills and knowledge if the needs of pregnant women with recognised 'high risk' pregnancies are to be met.

Midwives do not operate in isolation but are part of a wide and varied multi-disciplinary team of professional groups (Department of Health 2016). In the context of maternity care provision, midwifery practice appears to be central and enmeshed within the philosophies and practices of other professional disciplines and organisations such as the Royal College of Obstetricians and Gynaecologists (RCOG), National Institute for Clinical Excellence (NICE), and in Scotland, the Scottish Collegiate Guidelines Network (SIGN). Individual midwives also have to be mindful of the guidance and expectations laid upon them by the Nursing and Midwifery Council (NMC) and The Code of Professional Practice (2015, updated 2018) and the local protocols and policies laid down by their employers. Perhaps the most important group of people who influence practice in the context of maternity care is the pregnant women themselves and midwives must be careful to listen to the needs of individual women (The Best Start 2017) and to the consumer groups that represent them.

As midwives are the lead carers for all pregnant women this places them at the centre of a large inter-professional 'web' where they have remit and responsibility to liaise with colleagues

about how to provide appropriate care to individuals. This contextual position may both strengthen their position due to having additional support and resources to whom they can refer women or discuss care pathways but conversely, it may also be weakened due to midwives being expected to provide care and take on tasks that perhaps were traditionally the remit of other professions. Figure 1 illustrates the contextual situation of midwives in diagrammatical form. Both the contextual situation and the unique role that midwives play in maternity care were key factors when exploring how midwives construct their practices with respect to discussing the risk factors associated with living with a BMI≥30kg/m².

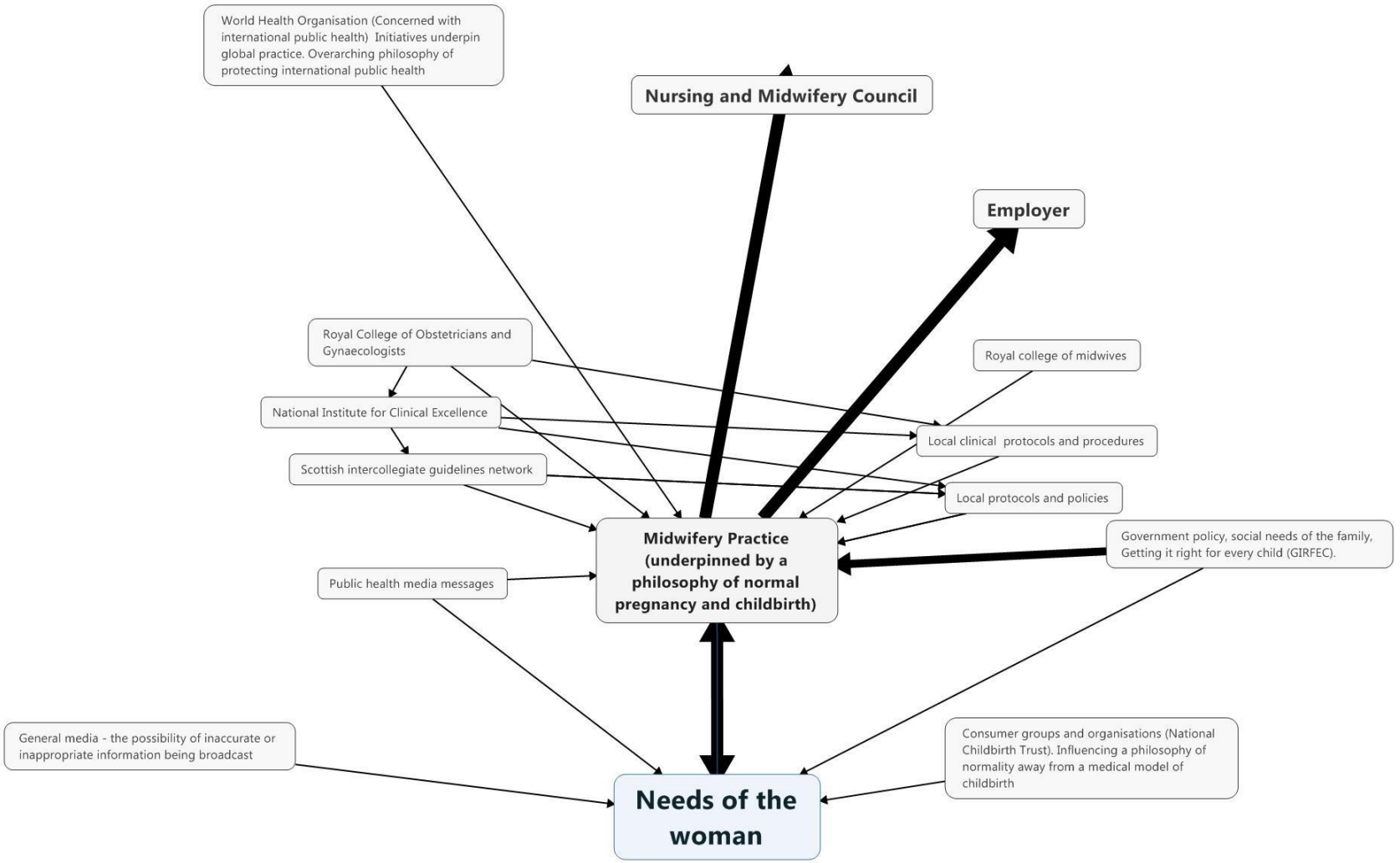

Figure 1 Diagrammitical illustration of midwives within the healthcare organisation

1.6 The Professional Midwife/Woman Relationship

The Nursing and Midwifery Council (NMC), in its revised Code of Professional Conduct (2015) that underpins the conduct of all nurses and midwives in the UK, states in part 6 that practitioners must “Always practise in line with the best available evidence” (NMC 2015, page7). By omitting relevant information with respect to being overweight or obese, midwives (and nurses) may be contravening their professional Code of Practice. However, the Code of Practice also states that people should be treated with ‘kindness, respect and compassion’ (NMC 2015, Page 6) and this may be seen by some practitioners a reason to not raise the topic of body weight for fear of causing offence. Practicing at this interface therefore, may be causing tension for midwives.

Most pregnant women in South East Scotland area now receive their antenatal care from midwives in the community rather than General Practitioners (GPs) or obstetricians. If the midwife identifies risk factors for mother and baby then he/she has a professional duty to refer that woman to the obstetrician (or other appropriate specialist) to ensure that appropriate care is provided (NMC 2015). Many women may present with major or minor risk factors and the midwife must discern carefully when referral is/is not appropriate. In the context of providing care to women who live with a raised BMI, individuals who present with a BMI>40kg/m^2 are referred to a specialist clinic (in NHS Lothian) but those who have a BMI of between 30kg/m^2 and 39.9kg/m^2 receive routine care only (in the absence of other risk factors). Having discussed the earlier evidence pertaining to the risks of obesity, this situation suggests that midwives should be in possession of current evidence/knowledge regarding the complex issues that surround living with a raised BMI in order to appropriately counsel women and offer advice about how they may optimise their health during pregnancy, and in so doing promote normality.

However, despite understanding that presenting for care with a raised BMI≥30kg/m² carries incumbent risks for pregnancy, labour and delivery there appears to be little guidance for midwives as to how to raise the apparently sensitive issues that surround being overweight or obese with women such as diet, nutrition and physical activity. Conversely, there appears to be an implied understanding within the documents (CEMACH 2011; RCOG 2010; WHO 2000; CMACE/RCOG 2010) that maintaining and controlling weight during pregnancy may reduce some of the risks to the woman and her baby. Indeed, the RCOG (2018) guidance on caring for obese pregnant women is explicit in saying that women should be informed about the risks of having a raised BMI whilst pregnant, as mentioned earlier. The NMC (2019) is also clear in stating that women and their families should be in a position to make fully informed decisions after being given all of the information they require to do so

Having the skills and knowledge to engage in honest conversations with women and their families about diet, nutrition and physical activity as well as the current available evidence pertaining to pregnancy and childbirth may be instrumental in enabling women to increase their chances of having a complication free pregnancy regardless of their body weight by facilitating them to change behaviours. In order to hold these honest and personalised discussions, midwives must act in a professional manner that enables a partnership to develop with the woman and within the context of the employing organisation (Frain 2018). Developing this woman-focused partnership is dependent upon the professional having efficient inter-personal skills (McCormack & McCance 2017) that will facilitate the professional to respond appropriately to the woman's needs. However, it is important to recognise that in a person-centred relationship the recipient is not passive, but an active member of the partnership (Frain & Wearn 2018). If midwives are to develop truly woman-focused relationships then their expert professional knowledge, clinical judgement skills and the needs of the woman should meet and a mutually agreed plan of care be made. As discussed earlier however, this may cause tension

for midwives because as professionals, they have a duty to ensure that the woman and her baby are provided with information that will promote safety, particularly if risk factors have been identified for either mother or baby (NMC 2019). This suggests therefore that the current model of midwifery care and the 'normality' paradigm in which midwives practice may need to 'shift' from one where pregnancies are viewed as either 'high risk' or 'normal', with midwives providing care for women with 'normal' pregnancies and obstetricians providing care and discussing risk with those women considered to have a 'high risk' pregnancy, or 'Paradigm X' (Seedhouse 2009) and shift to a model where midwives recognise that discussing risk, in detail with women, is an intrinsic part of their healthcare role, 'Paradigm Y' (Seedhouse 2009). Such a shift may then see both obstetricians and midwives taking ownership of risk management and facilitate both groups of professionals to engage in difficult conversations with women about their health both during and after pregnancy. Seedhouse (2009) explains that this paradigm shift from 'Paradigm X' to 'Paradigm Y' is concerned with personal freedom for individuals, in this case it may facilitate midwives to practice with a focus on risk management, meaning that perceived 'difficult conversations' will be more naturally incorporated into the antenatal appointment rather than leaving this task to obstetric medical staff. This approach, in turn may lead to open discussion with the woman that facilitates open discussions about her safety but also taking her birth preferences into account.

A Venn diagram illustrating this shift between the two paradigms of care can be seen in Figure 2.

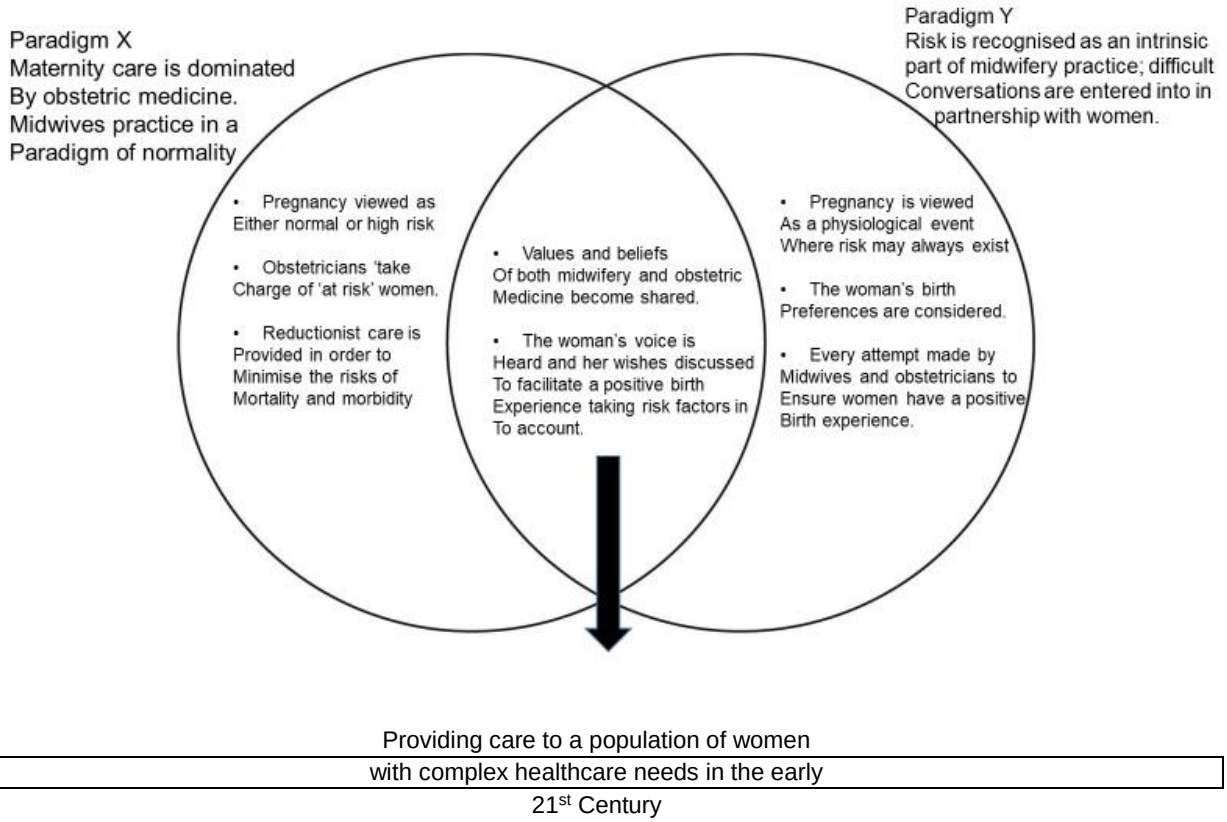

Figure 2. Venn diagram illustrating a potential paradigm shift frrrom viewing pregnancy as either normal or at risk to one where the woman's views are placed centrally

1.7 Conclusion

This opening chapter has demonstrated the potentially serious risks that exist for women and their babies of being overweight or obese during pregnancy. Despite these very real risks however, obesity rates continue to rise and it is expected that this in turn, will have consequences for future generations. This chapter has critiqued some of the challenges to midwifery practice in the context of midwives being situated in a complex web of professional organisations.

The evidence discussed in this chapter demonstrates that to be overweight or obese during pregnancy carries risks for both the mother and her baby both during pregnancy and for the

long-term health of the offspring. Currently, community midwives appear to be situated in an ideal position to have effective and supportive discussions with women who live with a raised BMI≥30kg/m² pertaining to their lifestyles choices in order to optimise their health during pregnancy. However, despite the comment 'women should be informed' being widely used in the clinical guideline with respect to obesity (RCOG 2018) little advice is provided for professionals as to how this information should be passed on to women. Currently, it is not clear if or how midwives enter into conversations with pregnant women about complex health and lifestyle issues or what the influencing factors or barriers pertaining to such conversations may be. Identifying the issues that surround raising the topic of obesity with women was pivotal in developing this research project and this is the area of professional practice that formed the focus of the research. A literature review was subsequently undertaken, the methods and findings of which are laid out in chapter 2.

2 Narrative Review of the Literature: Evaluating professional communication practices and the opinions of women who live with raised BMI≥30kg/m²

2.1 Introduction

This chapter explains how the literature review that was undertaken prior to the research commencing informed the subsequent research study. It explains the methodology of the main review of the dominant literature and how this literature was identified. It also includes a review of some key papers where lifestyle interventions have been implemented for women who are classified as being overweight or obese and whether these interventions were found to be effective. Finally, there is a short summary on the opinions of the women and how they felt about receiving information with respect to weight management and diet and nutrition during pregnancy.

2.2 Narrative Literature Review

Currently, it is not clear whether midwives prioritise any discussion with respect to being overweight or obese during routine antenatal appointments. Engaging in such conversations may positively influence maternal behaviour and facilitate women to make positive lifestyle choices, which may help to optimise their health during pregnancy, labour and birth and increase the chances of these women experiencing a normal antenatal course and achieving a problem free vaginal delivery. The purpose of this literature review was to critique the evidence that exists pertaining to how professionals practice when discussing being overweight or obese with pregnant women who live with a BMI≥30kg/m².

As discussed in the opening chapter of this document, the issues that surround living with obesity and its hazards for pregnant women and their babies are well represented in the

professional literature and depending upon what search terms are used, there are often several thousand ‘hits’ when one searches the electronic databases for particular information. Mulrow (1997) explains that in a community where a great deal of professional and research literature is published on a daily basis one needs to be able to identify what is relevant and what is not. She claims that “critical exploration, evaluation and synthesis” (Mulrow 1997, pp. 2) aids a systematic review and allows one to discard irrelevant material in order to focus on what is salient and relevant.

There was a need in this review to develop an understanding of what professionals’ thinking and practice currently was with respect to providing information and support to women who live with being overweight or obese during pregnancy. The literature review was designed to identify and to critically evaluate the evidence pertaining to current professional practices . With this in mind, two review questions were developed:-

- What evidence exists that is pertinent to midwifery and other professional practice when delivering care to pregnant women who are obese?
- What evidence exists that is pertinent to midwifery and other professionals when discussing being overweight or obese with pregnant women?

Aims and objectives for this literature search were developed in order to guide it in an efficient way in order to ensure that only papers that were of relevance to this study were considered.

The aims of this literature review were to identify literature that:-

- Explored the opinions and perceptions of midwives with respect to caring for and counselling obese pregnant women.

- Explored what the opinions and perceptions of all healthcare professionals including allied health professionals (AHPs) with respect to caring for and counselling obese pregnant women.
- Identify literature that explored how midwives perceived any educational provision they may have had with pertaining to the risks of being obese for pregnant women and their babies and/or educational provision with respect to diet and nutrition.

In order to give the literature search boundaries and to remain focused upon the most relevant and salient documents; the original inclusion/exclusion criteria were developed and can be seen below:-

2.3 Inclusion/Exclusion Criteria

Inclusion criteria: -

- Original research papers published since 2009, including international research.
- English language papers.
- Original research found in peer reviewed journals
- Systematic reviews
- Articles pertaining to all professionals who work in maternity care settings.

2.4 Exclusion criteria: -

- Opinion based articles.
- Clinical trials of interventions in care for obese pregnant women.
- Opinions of women.

- Animal models used to investigate the effects of being overweight or obese during pregnancy.
- Scientific articles that have explored the effect of obesity on the woman's health.
- Articles that have explored interventions for obese pregnant women.
- Articles pertaining to gestational diabetes and obesity in pregnancy.
- Articles pertaining to general midwifery education.
- Non- English articles.

The search was date limited in order to include the most recent papers available, it is only since 2009 that research into the consequences, and management of obesity have become prominent in the literature, therefore the original search was date limited from January 2009 – December 2014 (when the original literature search was commenced).

Obesity is not a public health issue that is unique to the UK; it has been described as a global epidemic (Oteng-Ntim et al. 2010, Smith & Lavender 2011 and Marriott & Hussainy 2014; World Health Organisation 2019). Given the global challenge of obesity as mentioned earlier in this paper, international papers were included in the search in order to capture as many views, opinions and perceptions from professionals internationally.

Although the focus of this literature review was aimed at investigating, perceptions and practices of professionals who deliver care to pregnant women rather than views from the pregnant women themselves, one paper was included that did capture opinions from both professionals and women (Furness et al. 2011). However, as engagement in this literature continued, more papers were identified that focused upon the views of the women themselves, the views of the pregnant women have proved illuminating and so a short review that focuses on key papers has

also been included. A summary table demonstrating the total number of papers that were reviewed can be seen in table 1.

Table 1. Overview of the number of papers reviewed and the category of each one (n=30)

Category of Paper	Number of Papers	Years of publication	Key Findings
Qualitative research (Professional practice)	9	2010 - 2017	• Midwives lack proficiency to raise and discuss the topics surrounding obesity. • Concern that doing so will negatively impact the midwife/woman relationship. • Educational provision is required for midwives
Quantitative research (Professional practice	11	2010 - 2015	
Lifestyle interventions (Emerging Evidence) Quantitative studies = 4. Qualitative studies = 0	4	2014 - 2015	Both moderating diet and engaging in physical activity may be beneficial in reducing GWG during pregnancy and reduce the risk of pregnancy outcomes.
Opinions of women (Emerging Evidence) Quantitative studies = 4 Qualitative studies = 2	6	2010 - 2014	Pregnant women may be receptive to advice pertaining to diet and physical activity

2.5 Literature Search Strategy

Appropriate literature was identified for this review by undertaking an electronic search using the databases CINAHL, MEDLINE, ERIC, EMBASE and the Cochrane Library. The search terms used were –'obesity', 'pregnancy', 'midwives' and 'education'. Some relevant articles were identified using these terms but the terms' pregnancy' and 'obesity' also identified studies where

animal models had been used to explore obese pregnancy from a bioscientific perspective, these papers were not relevant to this search. The search terms were therefore modified to

'pregnant women', 'obese women'', 'professionals' and 'education'. This refined the search and made identifying pertinent literature more efficient. A PRISMA chart demonstrating the initial literature search can be seen in Appendix 2.

No research papers that fitted the criteria for this search were found in ERIC, EMBASE or the Cochrane Library, therefore all of the included papers were found in the MEDLINE and CINAHL databases. Due to the unmanageable amount of papers first identified when the search terms were used (394,728), it was felt that the terms needed to be revised again in order to make the search as topic specific as possible. The final search terms used were 'obesity', 'pregnancy', 'midwives', 'health professionals' and 'obese pregnant women'. These terms yielded 1122 articles in total. Articles that met the inclusion criteria for this search were saved for review. It was only after each paper had been read twice, and in full that a decision was made as to whether it would be included in the final review or not. Eventually sixteen articles were identified for inclusion. One paper, (Ward 2012) was identified in the grey literature. Throughout this research process there was ongoing engagement with the literature to ensure that no key research papers had been missed. This resulted in another four papers being identified and included in the review (Pan et al 2015; Wilmore et al 2015; Arrish et al 2016; McParlin et al 2017). Twenty papers were included in the final review.

2.6 Critical Appraisal

According to Greenhalgh (2014), critical appraisal is a very specific way of assessing whether any research that has been undertaken to assess whether it has been done so in a trustworthy way by asking specific questions of each paper. She gives comprehensive examples of some of the questions that should be considered with interrogating the literature. In order to

summarise the salient points from each study that has been included in this review, critical appraisal tools were developed from work by Greenhalgh (2014) (See Appendix 3) and from Walsh & Downe's (2005) model (see Appendix 4).

Each relevant article that was included in this literature review was critically appraised by asking critical questions of each one that Walsh & Downe (2005) and Greenhalgh (2014) suggested. Walsh & Down (2005)'s appraisal tool was adapted for the qualitative papers and Greenhalgh (2014) for the quantitative ones. Informal notes were made during this appraisal process and a separate document was developed that corresponded to each study, the same questions were then asked of each paper for a second time. This allowed for deep interrogation of each paper in order to gain comprehensive understanding of how each research study was designed and executed and to consider the study populations what the findings of each study were. These notes were summarised and the information with respect to each one was added to data summary tables (Appendices 3,4,5,and 6). This process facilitated deep engagement with each article pertaining to the attitudes, perceptions and practice of midwives locally, nationally and internationally.

As previously mentioned, obesity is not a health related concern that is confined only to the UK, there have been references made in the general media about the 'global obesity epidemic' that healthcare professionals are now facing worldwide. Given the worldwide context and the challenge for healthcare providers in delivering advice to individuals who are either overweight or obese (WHO 2019), it was felt that to include international studies would add depth and alternative perspectives to the review despite the fact that maternity care provision may differ in international contexts. The international papers that have been identified and included in this review suggests that healthcare providers across the globe may also be facing challenges similar to those in the UK, when providing pregnant women with consistent, evidence based advice with regard to their (raised) BMI≥30kg/m².

2.7 Review of the Literature

2.7.1 Quantitative Studies

Of the twenty articles included in the review, nine were from the UK (Ward 2009; Oteng-Ntim et al. 2010; Furness et al. 2011; Smith et al. 2012; Heslehurst et al. 2013; Macleod et al. 2013; Foster &Hirst 2014; Singleton and Furber 2014; McParlin et al. 2017). Eight papers were from Australia (Schmied et al. 2010; Willcox et al. 2012; Biro et al. 2013; Wilkinson et al. 2013; Knight-Agarwal et al. 2014; Lucas et al. 2014; Wilmore et al. 2015; Arrish et al. 2016;). Two of the studies were from the USA (Herring et al. 2010; Stotland et al.2010), one was from New Zealand (Pan et al. 2015) and one was from Canada (Lutsiv et al. 2012).

Nine of the studies were designed within a quantitative paradigm (Herring et al. 2010; Ward 2010;

Lutsiv et a.l 2012; Biro et al. 2013; Wilkinson et al. 2013; Macleod et al. 2013; Pan et al. 2015; Arrish et al. 2016; McParlin et al. 2017) and sample numbers varied between twenty-nine (Ward 2010) and three hundred and thirty-three (Biro et al. 2013). Three of the studies included professionals other than midwives (Herring et al. 2010; Lutsiv et al. 2012 and Wilkinson 2013). Both Herring et al. (2010) and Lutsiv et al's. (2012) studies are from the USA where maternity care provision is delivered mainly by obstetricians and certified nurse midwives; this may explain why other professionals were included in the study. Wilkinson et al's. (2013) study is from Australia and this team included obstetricians and allied health professionals in their sample.

All of these research teams made use of electronic questionnaires and consent to participate was assumed if these were completed and returned. As is common with such research, response rates were often low (Robson & McCartan 2017), ranging from 6.9% (no = 329) (Arrish et al 2016) to 59.6% (no = 73) (Wilkinson et al. 2013). Pan et al. (2015) yielded the largest amount of returned questionnaires (no = 438), 42.9% response rate.

Each author has used slightly different terminology but the sentiment of all of these studies is the same: - to explore staff knowledge and practices when discussing diet and nutrition with women who have raised BMI>30kg/m². One study (McParlin et al.. 2017) explored how midwives offered physical activity advice only to women with raised BMI during the antenatal period but all of the others were concerned with how midwives practiced with respect to informing overweight and obese pregnant women about the risks of living with a BMI>30kg/m² and how to moderate these risks.

Three authors (Herring et al. 2010; Biro et al. 2013; Wilkinson et al. 2013) have all used a similar questionnaire that was initially developed in the USA by Herring et al. (2010). The authors explain that this was developed in light of available, relevant literature and then was piloted and modified for their specific use by a multi-disciplinary team of healthcare professionals. It is of note that the same questionnaire was used in Australia by Herring et al. (2013) and Wilkinson et al. (2013) albeit modified versions in each case, this adds to the validity and reliability of the work undertaken. By using a validated questionnaire, there is a suggestion that the responses will be consistent across these different studies (Parahoo 2014). In this case, that is significant due to the international nature of this review. Biro et al. (2013) and Wilkinson et al. (2013) have made it clear that they have modified the questionnaire and whilst it is not right to make assumptions one wonders if this was done to 'tailor' the questionnaires to specific populations. Neither Biro et al. (2013) nor Wilkinson et al. (2013) has made this clear in their papers.

The remaining authors (Ward 2009; Lutsiv et al. 2012; Macleod et al. 2013) all appeared to have developed their own questionnaires. Ward's (2009) study is the earliest and it is possible that there were no existing, appropriate data collection instruments available at the time that she conducted her study. Macleod et al. (2013) and Lutsiv et a.l (2012) appear to have followed the same process as Herring et al. (2010) and have developed their own questionnaire. Macleod et

al. (2013) give some detail as to how the questionnaire was developed by a multidisciplinary group and then was modified after being piloted, suggesting that the data collection instrument was robust. Lutsiv et al. (2012) give less detail in their article but explain that their primary outcome was to explore how many professionals advise women with respect to the Institute of Medicine (2009) guidelines. (See Appendix 3 for data summary table).

2.7.2 Qualitative Studies

Eleven studies in this review are of a qualitative nature (Oteng-Ntim et al. 2010; Schmied et al. 2010; Stotland et al. 2010; Furness et al. 2011; Smith et al. 2012; Wilcox et al. 2012; Heslehurst et al. 2013; Foster &Hirst 2014; Knight-Agarwal et al. 2014; Singleton & Furber 2014; Wilmore et al. 2015). A data synthesis table was adapted from Walsh & Downe's (2006) model and the articles were summarised using this tool and can be viewed in Appendix 4.

Five of the studies (Oteng-Ntim et al. 2010; Smith et al. 2012 and Willcox et al. 2012; Foster & Hirst 2014; Singleton & Furber 2014) employed in depth interviews as data collection methods. Four authors (Stotland et al. 2010; Furness et al. 2011; Heslehurst et al. 2013; Knight-Agarwal 2014) used only focus groups while the remaining two authors (Schmied et al. 2010; Wilmore et al. 2015) used a combination of both interviews and focus groups. Wilmore et al (2015) also used some observational techniques.

In contrast to the quantitative papers, sample sizes in these studies were much smaller. Small samples are common in qualitative studies because the intention is to yield deep, rich data in order to enter a participant's 'lifeworld'[2] or to see things through their eyes (Bryman 2004). Despite observing smaller sample sizes, four of the authors (Schmied et al. 2010; Stotland et al.

[2] Lifeworld is a philosophical term introduced by Edmund Husserl (1859-1938) and later developed by Martin Heidegger (1889-1976) to understand human existence. It is concerned with "practical activities and relationships which we are caught up in, and through which the world appears to us, and is made meaningful". (Smith et al 2009. Pp. 16-17)

2010; Heslehurst et al. 2013; Knight-Agarwal et al. 2014), all had relatively large numbers: 28, 34 and 52 respectively. These authors however, also chose to utilise several focus groups as a means of data collection and have explained that there were only 6-7 individuals in each one. All of the other authors have recruited much smaller numbers except Smith et al. (2012) who interviewed thirty healthcare professionals. Whilst the main focus for all of these papers was midwifery practice, several authors (Schmied et al. 2010; Stotland et al. 2010; Oteng-Ntim et al. 2010; Smith et al. 2012; Knight-Agarwal et al. 2014; Wilmore et al. 2015) all chose to include other professionals such as obstetricians, anaesthetists and physiotherapists. Only one author (Oteng-Ntim et al. 2010) included dietitians in his study. A number of themes emerged from the literature that are pertinent to professional practice when delivering care to women who are either overweight or obese and are discussed in the following sections. These themes were identified following the development of the data collection summaries (Appendices 3, 4, 5 and 6).

A dominant theme that emerged from some of the studies (Schmied et al. 2010; Smith et al. 2012; Heslehurst et al. 2013; Macleod et al. 2013; Foster & Hirst 2014; Knight-Agarwal et al. 2014; Singleton & Furber 2014; Pan et al. 2015; Arrish et al. 2016; McParlin et al. 2017) was that of communicating effectively with the women about their BMI. Midwives appeared to perceive that they had poor proficiency in raising the topic of obesity (Schmied et al. 2010; Foster & Hirst 2014; Stotland et al. 2014). Other authors (Lutsiv et al. 2012; Macleod et al. 2013; Singleton & Furber 2014; Pan et al. 2015; Arrish et al. 2016; McParlin et al. 2017) found that midwives and other professionals felt that raising the topic of obesity was difficult and they believed they had poor counselling proficiency with respect to entering into conversations pertaining to living with a raised BMI, weight management and diet and nutrition. Lutsiv et al. (2012) found that midwives believed that counselling with respect to being overweight or obese was ineffective but gives no further information as to how they arrived at this conclusion.

Lack of confidence in the professional's own ability was a consistent theme that emerged from the literature (Foster & Hirst 2012; Biro et al. 2013; Heslehurst et al. 2013; Knight-Agarwal et al. 2014 and Singleton & Furber 2014). Biro et al. (2013) found that where participants were aware of a clinical guideline, confidence improved and there was a higher chance of the topic of being overweight being discussed with women. Knight–Agarwal et al. (2014) found that there was frustration amongst midwives in Australia due to a lack of national guidelines for advice on gestational weight gain. Heslehurst et al. (2013) also found that midwives lacked confidence to raise this topic with women but of note, she found that midwives were positive when raising other sensitive issues for which they had received specific education such as gender-based violence and smoking. Foster & Hirst (2012) found that midwives doubted their credibility with respect to advice giving on the subject of obesity and that midwives 'struggled' to provide advice. Schmied et al. (2010) found that professionals were unsure of how to communicate with women with respect to this topic.

It appears that one of the main perceived barriers to discussing weight with women reported in the literature was that the professionals believed that this was too sensitive a topic to raise with women and they were afraid that doing so may negatively impact upon the midwife/woman relationship (Heslehurst et al. 2013; Knight-Agarwal et al. 2014; McParlin et al. 2017). Midwives felt that they required to know *how* to impart information rather than *why.* (Stotland et al. 2009; Schmied et al. 2010; Knight-Agarwal et al. 2014).

2.7.3 Advice Inconsistencies

Several authors (Herring et al. 2010; Furness et al. 2011; Lutsiv et al. 2012; Macleod et al. 2013; Biro et al. 2013; Foster & Hirst 2014) all found that healthcare professionals (including

midwives) delivered inconsistent information to women despite having an understanding of the incumbent risks that being overweight or obese had for women and babies. This occurred across the same healthcare provision areas and across the same professional groups. Herring et al. (2010) demonstrated that only 63% of respondents could accurately identify the correct BMI that delimits obesity. Biro et al. (2012) also demonstrated that out of the cohort that responded to their survey only 30% of individuals were able to quote the recommended Institute of Medicine's (IOM) (2009) recommended weight gain in pregnancy, in Wilkinson et al's. (2013) cohort only 8% were able to quote these values.

Wilkinson et al. (2013) identified that an Australian national clinical guideline that was published with respect to caring for obese pregnant women was not commonly known about with only 32.1% of respondents stating awareness of it. Biro et al. (2013) studied a population of midwives in the same geographical area as Wilkinson et al. (2013) and identified that midwives who were aware of the clinical guideline viewed their education around this topic more positively and were more likely to raise the issue of obesity with women.

The significance of gestational weight gain in pregnancy was not always acknowledged by respondents (Ward 2009; Willcox et al. 2012). Willcox et al. (2012) found that the topic of gestational weight gain holds a low priority for midwives. In her study, Ward (2009) also found that out of 22 respondents 73% of midwives routinely discuss the issue of weight and weight gain with women but that 13.5% did not discuss it at all, the content of the discussions that took place with respect to diet and nutrition however, is not made clear in the report. Stotland et al. (2009), Schmied et al. (2010) and Knight-Agarwal et al. (2014), all identified that confusion existed as to what information and advice women should receive during pregnancy with respect to obesity and gestational weight gain.

Professionals believed that their own knowledge with respect to obesity and diet and nutrition was lacking and that this made them less confident in raising a topic that they felt they would be unable to expand upon (Herring et al. 2010; Stotland et al. 2010; Arrish et al. 2017).

2.7.4 Support within Health Organisations

Several of the authors (Biro et al. 2013; Foster & Hirst 2014 and Pan et al. 2015) all found that there was a lack of support services and referral pathways for obese women within their respective health organisations. This included a lack of evidenced guidelines, lack of appropriate literature provided for women and in two studies (Ward 2010; Lutsiv et al. 2012), there was found to be poor levels of referral to dietitians although it was unclear how accessible the dietetic service was in each geographical area. Furness et al. (2011) found that having a multi-disciplinary approach to caring for and supporting obese pregnant women may be beneficial. Schmied et al. (2010) also found that midwives were unclear as to how they should provide care to obese pregnant women while Macleod et al. (2013) found that the midwives had been given no clear guidance from their organisations as to what their specific role was with respect to caring for and supporting obese pregnant women. Biro et al. (2013) were explicit in their recommendations and say that institutional change is required in order to provide robust care for obese pregnant women.

2.7.5 Education for Healthcare Professionals

A need to provide midwives (and other professionals) with appropriate education was another prominent theme that emerged from this literature. Findings suggest that there is a need to adequately educate professionals with respect to what the risks of being overweight or obese are during pregnancy and also to adequately provide them with accurate, evidence based advice in order that they can accurately counsel pregnant women about the topic (Ward 2009; Stotland et al. 2010; Herring et al. 2010; Smith et al. 2012; Biro et al. 2013; Wilkinson et al.

2013; Arrish et al. 2017). Finally, Schmied et al. (2010) described midwives as 'feeling in the dark' and said that they were bewildered as to how they should be providing care to women who presented for care with raised BMI≥30kg/m².

2.8 Discussion

2.8.1 Professionalism and Midwifery Practice

The findings of this review suggest that despite professionals being aware of the risks for women who are either overweight or obese during pregnancy they are reluctant to raise the topic with them. Several possible reasons for this were cited such as time constraints, lack of appropriate knowledge, lack of confidence, lack of appropriate guidance from the healthcare organisation, embarrassment and a lack of clear understanding as to what the role of the midwife is with respect to providing information and advice about being overweight or obese to women (Schmied et al. 2010; Heslehurst et al. 2013; McLeod et al. 2013; Foster & Hirst 2014; Singleton & Furber 2014). Whatever the individual reasons for the midwives and other professional groups not offering appropriate advice to women, it must be borne in mind that midwives are professional people who have a responsibility to deliver evidence-based advice to pregnant women and their families. As noted in the introduction, the Nursing and Midwifery Council (NMC), in its revised Code of Professional Conduct (2016, updated 2018) that underpins the conduct of all nurses and midwives in the UK, states in part 6 that practitioners must "Always practise in line with the best available evidence" (NMC 2016, page7). By omitting relevant information with respect to being overweight or obese, midwives (and nurses) may be contravening this Code. The NMC goes on to say in its document 'Practising as a Midwife in the UK' (2019) that:

> …Midwives must provide care based on the best available evidence. They must keep their knowledge and skills up to date to make sure their care is responsive to emerging evidence and future developments. (NMC 2019, p.4)

The biomedical evidence with respect to the risks of being overweight or obese in pregnancy appears to be unequivocal; it is concerning therefore, that midwives (and other professionals) appear to perceive that they lack the skills, knowledge and confidence to raise such an important issue and one that potentially has far reaching implications for health.

A finding that emerged from the literature review suggested that educational provision would be required in order to provide midwives with the appropriate knowledge and skills to facilitate them when discussing the risks of being overweight or obese with pregnant women (Ward 2009; Herring 2010; Stotland et al. 2010; Smith et al. 2012; Biro et al. 2013: Wilkinson et al. 2013; Arrish et al. 2016: McParlin et al. 2017). However, the above quote from the NMC suggests that midwives (as autonomous practitioners) should be taking responsibility for their own learning and accessing appropriate literature independently in order to ensure they have updated themselves with relevant knowledge. This approach to practice and learning may not only, it could be argued, enhance the experience of the women who would receive appropriate and evidence base information, but also ensure that midwives remain true to their professional role and the expectations and standards expected of them by the NMC in The Code of Practice (2016, updated January 2018). One could argue that it may also increase the midwife's autonomy and confidence when approaching and conducting antenatal consultations. Midwives in the UK have the legal right to practice autonomously (NMC 2009), however, this comes with a commitment to engage in lifelong learning (MacDonald 2017), it is reasonable therefore to expect this level of commitment and independent learning of registered professionals.

2.8.2 Providing Care to Women with Raised BMI≥30kg/m² - Educational Needs for Midwives

Despite asserting that midwives should take responsibility for their own learning, there appeared to be an expectation by practitioners that the healthcare organisations should take some responsibility for providing education too. It was not made clear within the literature what kind of education the midwives felt would be acceptable or what specific topics surrounding the complex issues of obesity should be included but Furness et al. (2012) concluded that there needed to be more awareness of the risks of obesity amongst professional people. The specific content of educational provision with respect to caring for pregnant women who present with raised BMI>30kg/m² was not clearly defined in the literature (Herring et al. 2010; Stotland et al. 2010; Smith et al. 2012; Biro et al. 2013). The issue of obesity in pregnancy encompasses several issues and this may pose a challenge when developing educational resources for professionals. Examples of these issues are - the risks that exist for both the mother and baby when a pregnant woman has a raised BMI≥30kg/m² during pregnancy, equipping professionals with the most appropriate dietary modifications that obese pregnant women could focus upon in order to modify the risks of complications arising during pregnancy, any lifestyle changes such as physical activity that women could make during pregnancy as well as the ongoing sequalea for the offspring.

2.8.3 Availability of Evidenced Clinical Guidelines

Another theme that emerged from this review was the lack of evidence based guidelines that provided information for professionals who provided care and advice for women who were defined as being overweight or obese (Ward 2009; Biro et al. 2013; Foster & Hirst 2014). Providing such guidance may go some way to helping define the role of the midwife (and other

professionals) with respect to discussing the complex issues that surround being overweight or obese and may again instil confidence in some professionals as Biro et al. (2013) suggests.

The RCOG (2018) guideline is the most recent document aimed at supporting professional practice surrounding the care of pregnant women who live with raised BMI≥30kg/m². However, it may be helpful for professionals if independent health authorities developed their own specific guidelines that took into account specific population needs in particular geographical areas considering, for example, areas of social deprivation and/or ethnic diversity where different cultural views should be considered. The RCOG (2018) guideline aims to guide and support professional practice surrounding the advice and care that pregnant women should receive before, during and after pregnancy with respect to their weight. Other professional groups are also cited in this paper (RCOG 2018) as being central to providing care for this population of women and they are GPs, Health Visitors, and community and practice nurses. How pro-active these other professional groups are with respect to providing pre-conceptual advice is not well represented in the literature but given the rising rates of being overweight or obese in the UK as discussed in chapter 1, it is possible that the RCOG (2018) guidance is not utilised to its full potential. It may therefore be appropriate for health organisations to publicise this document in a more pro-active way. In the context of professional practice however, midwives have a responsibility to access this and other policy documents for themselves.

2.8.4 Professional Communication and Counselling Skills

It is of note that poorly honed communication skills were cited in the literature as being a barrier for midwives when discussing obesity in pregnancy (Stotland et al. 2010; Smith et al. 2012; Knight-Agarwal et al. 2014; Singleton & Furber 2014; MCParlin et al. 2017). Communication skills in midwifery practice are considered basic requirements (Jomeen 2017). Initially this

review sought to understand what midwives' attitudes and practices were when caring for obese pregnant women but it has also illuminated the fact that communication and counselling skills may require educational attention. If midwives do not feel confident in raising the topic of obesity with women then one could argue that they are failing in their professional duty to provide accurate information to women. This suggests that a standardised and systematic approach to communication may be helpful when professionals raise and address this complex issue with women. Smith et al. (2012) found that respondents in their study felt that a move to prescriptive standardised questions at the antenatal booking appointment (first appointment in pregnancy) might have been helpful in offering standardised care to women. However, this may turn the antenatal appointment into a list of tick points and culminate in there having been no meaningful discussion about any relevant topics for individual women and that approach is not conducive to providing a woman centred approach to care (McCormack & McCance 2017).

Lutsiv et al. (2012) have specifically sought to investigate counselling practices of professionals with respect to obese pregnant women rather than practices in general. Given that the review appears to have illuminated that there is a low level of advice given to obese pregnant women by midwives, one has to be mindful that education with respect to counselling and communication may be required for midwives in addition to education surrounding the subject matter itself.

2.9 Limitations of Literature Review

This narrative literature review was approached utilising the principles of a systematic search. However, it is small with only twenty papers having been included. There may have been other sources of research available in the grey literature that was not scrutinised due to time constraints. Nevertheless, the identification of a small number of studies suggests that there is a

need for more work to be done with respect to how professionals discuss the issues that surround providing care and support to pregnant women who live with raised BMI≥30kg/m².

Some of the literature that was reviewed is now dated, with the earliest paper being from 2009 however, as the topics of being overweight and obese during pregnancy are now emerging as prominent health issues in the general media as well as in the healthcare media it is likely they are still relevant and current. Only four additional papers were identified pertaining to this area of professional practice in the few years leading up to the data collection phase of the research (Pan et al. 2015; Wilmore et al. 2015; Arrish et al. 2016; McParlin et al. 2017;). These additional papers were however, considered 'key' in relation to the topics being appraised in the context of this review.

It is likely that maternity care provision may differ in various countries and other roles may be unique in different international contexts. Certified nurse midwives for example, practice in the USA but this grade of staff does not exist in the UK. It is also difficult to discern what the role of the midwife is across the globe and how much autonomy the midwife has in various international contexts. The title itself does not guarantee universal practice patterns internationally and it is entirely possible that midwives may have a different role in Australia and New Zealand for example, compared to the UK.

This review included papers that have focused not just upon midwives but upon other healthcare providers too and this leads to uncertainty about how specific groups of professionals are actually practicing. Six authors included obstetricians and other professionals in their sample (Stotland et al. 2010; Oteng-Ntim et al. 2010; Furness et al. 2011; Lutsiv et al. 2012; Smith et al. 2012; Wilkinson et al. 2013). It is not clear if these professionals practice within a healthcare organisation or if they are independent practitioners and this may have caused some bias in the findings.

2.10 Emerging Evidence – Interventions dietary and physical activity interventions and the wishes/opinions of women.

In recent years two new bodies of evidence have been emerging - that of advising women about lifestyle interventions and the evidence that suggests that women would welcome information and advice surrounding living with a raised BMI≥30kg/m² regarding diet, nutrition, physical activity and GWG. Data summary tables pertaining to these two bodies of evidence can be seen in Appendices 5 and 6. The same appraisal tools were used to interrogate these papers as in the main review. The same critical appraisal tools were used to interrogate these papers as was used in the principle review (Walsh & Downe 2014 and Greenhalgh 2014).

The emerging evidence suggests that if women modify their diets, engage in physical activity and contain their gestational weight gain (GWG) that this in turn will reduce the risks to themselves and to their unborn babies during pregnancy labour and birth (discussed in the chapter 1). It also anticipated that this will promote good health for the child during his/her lifetime continuum (Thangaratinam et al. 2012; Reynolds et al. 2013; Jewell et al. 2014; McGivernon et al. 2014; Ronnberg et al. 2014; Stirrat & Reynolds 2014; Haby et al. 2015).

Key papers reporting on original research surrounding the additional topics of intervention and the wishes of the women were identified as this research project developed. A literature review and meta-analysis by Thangaratinam et al (2012) was included. This key paper included 44 studies and 7278 women and found that interventions with respect to diet, physical activity and a mixed approach had a positive impact in reducing the risk of pre-eclampsia and shoulder dystocia. However, interventions that focused on diet only were also found to have a positive impact in reducing gestational weight gain (GWG). More recently, other studies (Jewell et al. 2014; McGiveron et al. 2014; Ronnberg et al. 2014; Haby et al. 2015) have all investigated similar interventions. All the authors found that offering intervention to women either during a face-to-face session or in a group session reduced the risk of excessive weight gain during pregnancy. Since the original literature search, a further systematic review by Muktabhant et al.

(2015) has been published and Ronnberg et al's. (2014) article was included in this paper. The authors concluded that a combination of diet and exercise during pregnancy can reduce the risks of complications arising when a pregnant woman is obese. However, they go on to say that further work is required in order to develop safe guidelines for women when exercising. They also note that these findings are pertinent to developing countries.

In three of the studies reviewed here, (Jewell et al. 2014; McGiveron et al. 2014; Haby et al. 2015), women were identified for inclusion at the first appointment depending upon their BMI. All the women required to have a BMI of 30kg/m² or more. Haby et al. (2015) chose to include women with BMI between 30kg/m² and 40kg/m² whilst Jewell et al's. (2014) inclusion criterion with respect to BMI was women with a BMI≥30kg/m², McGiveron et al. (2014) recruited women with a BMI≥35kg/m². Ronnberg et al's. (2014) studied differed in that their objective was to assist women in reducing GWG irrespective of their BMI. Women who had a BMI>19kg/m² were eligible to be recruited.

All the women recruited to the studies were identified at the first antenatal appointment and were invited to take part in the respective studies. Haby et al. (2015) and Ronnberg et al. (2014) designed randomised controlled trials (RCT). Haby et al's. (2015) research design was 'blinded' whilst Ronnberg et al's. (2014) was not. The other authors (Jewell et al. 2014; McGiveron et al. 2014) both carried out feasibility studies to assess whether interventions with respect to lifestyle were effective in pregnancy. Sample sizes were relatively large in all cases. Haby et al. (2015) recruited 50 women in the intervention group and non-intervention group, Ronnberg et al. (2014) recruited 221 women to their intervention group and 224 to the standard care group. Jewell et al. (2014) recruited 148 women to their study. Interestingly McGiveron et al. (2014) did not describe their feasibility study as an RCT but they did recruit women to an intervention and non-intervention group. There were 89 women in each group.

Interventions were implemented either by issuing information to the women during group sessions (Jewell et al. 2014; McGivernon et al. 2014) or by individual sessions where information pertaining to lifestyle was delivered (Ronnberg et al. 2014; Haby et al. 2015). Haby et al's (2015) study is the only one which informs us that participants were given written prescribed information with respect to modifying lifestyle choices.

Gestational weight gain (GWG) was reduced for women in all four study groups where there was intervention (Jewell et al. 2014; McGiveron et al. 2014; Ronnberg et al. 2014; Haby et al. 2015) and there was a reduction in complications during labour and birth. There appeared to be no adverse health outcomes for women or their babies in any of the intervention groups. Jewell et al. (2014) found that intervention by means of offering obese women specialist advice was acceptable to them.

The results of these studies (Jewell et al. 2014; McGiveron et al. 2014; Ronnberg et al. 2014; Haby et al. 2015) are encouraging and suggest that specifically designed advice targeting diet and physical activity may have a positive impact on the health of overweight and obese pregnant women and reduce the risk of complications arising during labour and birth. In three of the studies (McGivernon et al. 2014; Ronnberg et al. 2014; Haby et al. 2015), lifestyle advice was given by a specifically trained midwife and in one (Jewell et al. 2014) dietary advice was given by a lay person who was knowledgeable about healthy eating and weight loss. This suggests that practitioners, who have received appropriate education with respect to being overweight or obese during pregnancy may be able to offer specialist advice during routine antenatal clinics in order to assist overweight and obese pregnant women to optimise their health and reduce their GWG.

Whilst this is encouraging, it must be borne in mind that only one of the studies (Haby et al.

2015) was a blinded, randomised controlled trial (RCT). In the other studies (Jewell et al. 2014; McGiveron et al. 2014; Ronnberg et al. 2014), women were self-selecting and it may be likely that only motivated women who wished to optimise their health during pregnancy chose to take part in the various interventions which suggests that some population bias may have been at play.

It is of note that Jewell et al. (2014) comment that recruitment was initially slow despite midwives having received specialist training. The authors do not make clear if this training pertained to weight maintenance and diet or if it pertained to how to introduce research to women and how to recruit women to research studies. This reluctance to raise the topic of obesity with women however is in keeping with one of the findings from the initial literature review which suggested that professionals find raising the topic of overweight and obesity with women

difficult to do.

The only mention in these four studies (Jewell et al. 2014; McGivernon et al. 2014; Ronnberg et al. 2014; Haby et al. 2015) of how communication is used is by Ronnberg et al (2014) who provided written prescribed information for women with respect to physical activity. Jewell et al. (2014) and McGivernon et al. (2014) provided antenatal/support groups for women to attend whilst Haby et al. (2015) provided one to one sessions for women with professionals.

2.11 Opinions of Pregnant Women (About Information Received From Professionals)

As described above, there was constant engagement in the electronic databases that facilitated in identifying key papers pertaining to the wishes and opinions of women. Seven papers were

included in this part of the review (Russell et al. 2010; Wilkinson & Torcher 2010; Furness et al. 2011; Keely et al. 2011; Lutsiv et al. 2012; Porteous et al. 2014). A data summary table pertaining to this literature can be seen in Appendix 6. Furness et al. (2011) chose to employ focus groups to collect data, whilst the other studies (Lutsiv et al. 2012; Porteous et al. 2014; Russell et al. 2010) used survey questionnaires. Porteous et al (2014) administered their questionnaire to professionals in person whilst the remaining researchers Russell et al (2010) used an online survey questionnaire and Wilkinson & Torcher (2010) surveyed staff and women using survey questionnaire.

Sample sizes varied between the studies. Furness et al. (2011) and Keely et al. (2011) had only six and eight women respectively in their studies. Furness et al. (2011) chose to use focus groups whilst Keely et al. (2011) collected their data using semi-structured interviews. With respect to qualitative research, these small numbers are common and can allow a great deal of in depth data to be collected (Bryman 2004). However, these women were self-selecting and so some population bias may have been at play. The remaining studies (Porteous et al. 2014; Russell et al.2010) had much larger sample sizes of 309 and 6252 respectively but again inclusion was voluntary and so some population bias may have influenced the findings. Russell et al's. (2010) data collection tool was made available to women on a parental online forum and women were invited to complete it, although it is likely that women who were pregnant or who had recently delivered a baby were the most likely people to have responded, it is impossible to discern as no demographic data appears to have been captured. Porteous et al. (2014) however sent their data collection tool by post to individuals who had recently used maternity services.

Furness et al. (2011) found that women received limited advice with respect to diet and also received conflicting advice. Findings also appeared to confirm that women were aware that risks existed with respect to being overweight and would have welcomed advice from

professionals. Both studies (Russell et al. 2010; Furness et al. 2011) found that imparting dietetic advice did not seem to be a priority for midwives despite the fact that women were keen to receive such information. These findings are in contrast to Keely et al's (2011) findings where none of the women claimed to be aware of the risks that being overweight or obese posed. Keely et al. (2011) concluded that women had been given inadequate information about the risks of their obesity to both them and their offspring.

Population bias may also have influenced the results of Wilkinson & Tolcher (2010) as their questionnaire was self-administered and it may have been only more motivated women who chose to respond. In their sample group of 102 women, they found that over half of the antenatal women who responded were interested in receiving nutritional education. They further explored this and found that women would have liked advice with respect to healthy eating in pregnancy, weight management, and information for vegetarian and vegan women and nutrition for breastfeeding. Other topics such as Listeria infection were also explored.

Lucas et al. (2014) undertook a systematic literature review of research papers which aimed to identify what advice women had received with respect to nutrition during pregnancy. Thirty one studies were included in the review and the authors comment that most of the studies were of low quality. Nevertheless, their findings have suggested that women expected more information and advice with respect to nutritional advice. They also found that women trusted the information given to them by professionals and although they sought advice from other sources, i.e. the internet, they were unsure of what was or was not safe. This suggests that women would find evidence based advice helpful if given by an appropriately educated professional and this may have ongoing implications for service development.

Available evidence within the literature suggests that women would find receiving lifestyle advice with respect to moderating lifestyle choices during pregnancy acceptable. However, the review of the literature surrounding professional behaviour pertaining to these issues suggests that this

area of practice may be omitted and that professionals find discussing the topic of being overweight or obese with women uncomfortable. This suggests that there may be a 'missing link' between what is currently known about the risks of being overweight or obese during pregnancy and what information the pregnant women are being given with respect to managing their weight and making lifestyle adaptations that may improve their health during pregnancy. This missing link may be related to the communication skills of the professionals rather than knowledge pertaining to the subject matter itself.

2.12 Conclusion

It is now widely recognised in the biomedical literature (as discussed chapter 1) that to be overweight or obese carries incumbent risks for pregnant women and their unborn babies. However, as more evidence emerges about the issues that surround living with a raised BMI≥30kg/m, it also appears that to control weight gain during pregnancy by modifying diet and engaging in physical activity can go some way to ameliorating these risks. Despite this emerging evidence, there appears to be a' missing link' between what is known and the information that pregnant women are receiving from professionals with respect to living with a raised BMI≥30kg/m². The findings from this literature review and the epidemiological evidence discussed in chapter 1, therefore suggest that an exploration of how community midwives develop their practice when delivering care to obese pregnant women was worthy of further exploration.

The following chapter focuses on the methodology that was used to underpin the research study.

3 Conceptual Framework, Research Design, Theoretical Underpinnings, Methodology and Methods

3.1 Introduction

This chapter discusses the underpinning philosophical position that supported this research study:- the research design, data collection and analysis. Critical reflexive practice is defined and there is a section discussing how it was applied in a research context. This chapter opens however, with an explanation about the initial ideas were developed from which the research study was born.

3.2 Clinical Conceptual Framework

The conceptual foundation for the proposed study was born from personal experience of having been the lead midwife in the Metabolic Antenatal Clinic (MAC). In the course of introducing women who were to attend for their first appointment they would often volunteer information about previous episodes of care they had had with their community midwives. These anecdotal accounts often related to the midwives raising the topic of their body size and the necessity for referral to the MAC, often the women felt this had been raised insensitively and had caused them distress.

This preliminary literature review has suggested that further work with respect to *how* midwives use their communication skills to raise the topic of being overweight or obese with women may be valuable in understanding what any facilitators and barriers may exist during antenatal appointments. Initially the author hypothesised that midwives required more focused education with respect to the issues that surrounded living with being overweight or obese during pregnancy and the incumbent risks that this posed for women and their unborn babies.. This

review however, has highlighted some areas where new knowledge may further inform midwifery practice, particularly concerning advice giving to women who live with a BMI≥30kg/m². Midwives may lack confidence when raising the subject of being overweight or obese with women resulting in women not receiving appropriate and relevant information.

3.3 Conceptual Framework

Practicing as a critically reflective and reflexive professional led to curiosity as to how professionals raised and maintained dialogue with women who lived with a raised BMI≥30kg/m² and a belief that this area of practice was worthy of academic enquiry. A conceptual framework illustrating the specific area of midwifery practice that was identified for exploration and can be seen overleaf. According to Miles and Huberman (1994), a conceptual framework is either a narrative or a graphical representation of the topic that is to be explored and can be useful in demonstrating the various theories and variables that may be linked to the specific area of proposed research. It can also assist in specifically defining the phenomenon that is to be explored or investigated and can aid the researcher in identifying his/her worldview of this particular topic (Adom et al. 2018). Prior to developing the conceptual framework, a 'mind map' was developed that assisted in organising thoughts and considering the underpinning evidence that currently supports practice (Appendix 7), the thick black line illustrates that this study is concerned with exploring what occurs during an antenatal appointment. The influencing factors that surround clinical practice have been considered and are included in this diagram. Issues such as professional frameworks in which midwives find themselves operating, the professional organisations that he/she is answerable to, his/her own knowledge and understanding pertaining to the social and bioscientific knowledge that surrounds being overweight or obese during pregnancy. The women who present for maternity care may also influence how the interaction between themselves and the midwife plays out depending upon their socio-economic situation or their personal wishes for their maternity care irrespective of their body weight.

Following this analytical thinking, a conceptual framework was developed, demonstrating the area of practice to be investigated in the context of the woman's lifelong continuum. This can be seen below in Figure 3.

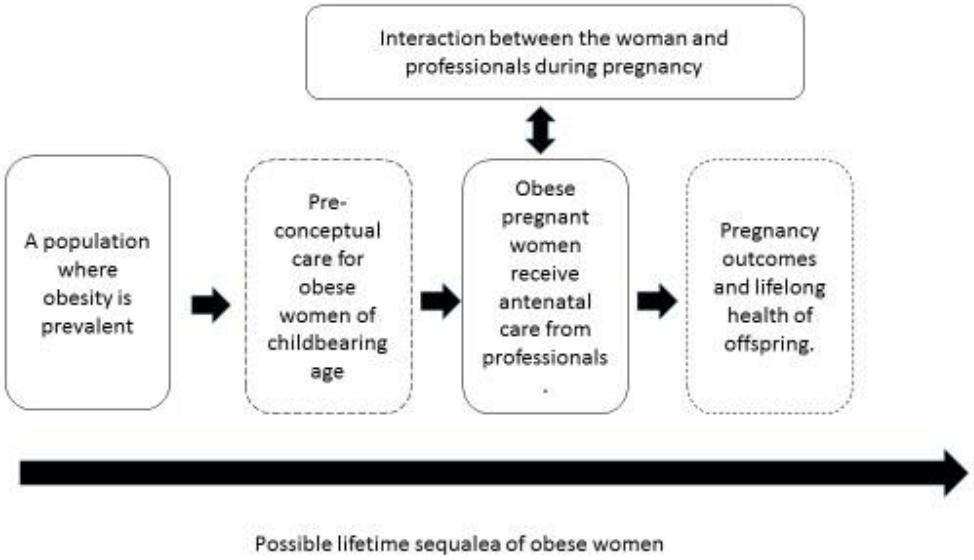

Figure 3. Conceptual framework illustrating the area of practice to be explored

Initially the idea for this research was not well defined, there had been little thought given to the structures and frameworks in which midwives operated and what might be the influencing or inhibiting factors. Developing both the mind-map (Appendix 7) and the conceptual framework did assist in streamlining ideas until it became clear that the specific area of practice for exploration was, as illustrated, the conversations that take place between women (and their families) and the midwives in the context of organisational and professional structures in which they operate. This interface between women and midwives may also be influenced by social factors that are pertinent to the women who present for care and influence may be exerted from other social structures. For example, as seen in the literature review, a feeling of discomfort in raising the topic of being overweight or obese because it is assumed to be socially

unacceptable (Biro et al. 2013; Heslehurst et al. 2013) To develop an understanding of what it means for the midwives when raising the perceived sensitive topic of obesity with women who are presenting for care early in pregnancy by entering their 'lifeworld'[3].

- To explore how midwives approach the antenatal consultation when they are aware that they may need to raise perceived sensitive topics with pregnant women who are either overweight or obese.

- To explore the contextual position of midwifery practice and to identify whether the objectives of other professional groups and the employing oragnisation impact upon midwifery practice.

Having considered what the aims of the study were, a research question was developed. This question encompassed the aims of the study. The research question that was developed was as follows:-

How do midwives construct their practices in the context of providing maternity care to women who present with a BMI≥30-39.9kg/m² during antenatal appointments?

3.4 Philosophical Underpinning and Theoretical Framework

3.4.1 Ontological Position

Ontology is the study of truth or reality and is concerned with whether there may be one 'truth' or 'answer' to a question or several (Crotty 2015). The accepted label attached to the former

[3] Lifeworld – A philosophical term introduced by Edmund Husserl (1859-1938) and later developed by Martin Heidegger (1889-1976) to understand human existence. It is concerned with the "practical activities and relationships which we are caught up in, and through which the world appears to us, and is made meaningful". (Smith et al 2009, pp. 16-17).

explanation is ‘positivist’ and to the latter is ‘interpretivist’ (Crotty 2015). This research focused upon the central role that community midwives occupy in a pregnant woman’s life where the pregnancy is uncomplicated and the supporting role they play when pregnancy complications arise (Pathways for Maternity Care 2009) paying particular attention to their public health remit (Dunkley-Bent 2004).

As previously discussed, the intention of this research was to explore and illuminate how community midwives approach the topic of being overweight or obese with pregnant women during antenatal appointments, what it means for them to do so and how they understand their practice with respect to this topic. Midwifery is a graduate profession and registered midwives in the UK are professionally accountable to the Nursing and Midwifery Council of the UK. Midwives are however, individuals and it may be likely that their practices have been influenced by differing experiences both in their professional and social worlds; this may in turn have led to subtle variations in their individual practices with respect to how they communicate with women concerning key health related topics, living with a raised BMI≥30kg/m² being one. By acknowledging this potential variation in practice, one should accept that multiple ‘truths’ or ‘realities’ might exist from professional to professional. This understanding of the midwives individuality therefore situates the research in an ontological position that is interpretivist. Interpretivist inquiry focuses upon the understanding and meanings that individuals attach to experiences within their own life-worlds (Denzin & Lincoln 2003; Snape & Spencer 2003).

3.4.2 Epistemological Position

Having situated this research in an interpretivist paradigm, there followed some internal debate as to what the epistemological position might be. Epistemology is the philosophy or theory of knowledge (Crotty 2015; James 2015). It is concerned with the debate or study about how we gain knowledge and understanding about a specific issue and what is worth knowing and

understanding about that issue (Crotty 2015; James 2015). With respect to the topic under exploration here, the experience of midwives and their understanding of their unique experiences in the context of their professional practice when faced with the phenomenon of discussing issues surrounding being overweight or obese with pregnant women was the focus. Initially, a phenomenology approach was considered the most appropriate philosophical underpinning for this research but this position shifted as the study developed.

Phenomenology is a both a philosophy and a methodology (Crotty 1998; James 2015; Quinn Patton 2015) that is concerned with exploring the lived experience and the meaning of that experience from the perspective of the individual who has lived through it (Smith et al 2009; Crotty 2015). Phenomenological research therefore, draws upon the interpretation of experiences but it is not concerned with just obtaining a description of what the experience was like for individuals. It is also (or perhaps more) concerned with understanding the meaning that lies behind any particular lived experience (Cresswell 2009). Adopting a phenomenological epistemology therefore, appeared to be the most suitable standpoint from which to explore the professional practice of community midwives, however, this research was not just concerned with the experiences and understanding of the midwives' experiences in raising and discussing what appears to a difficult topic with women. It also aimed to explore how the contextual position of the midwifery service within a complex healthcare organisation may be influencing (or inhibiting) particular practices. This led to a decision to shift the epistemological position from one of phenomenology to one of social constructionism in order to explore the experiences of the midwives in relation to their contextual position. The realisation and understanding that the contextual situation of the midwives developed during the data collection phase of the study where midwives identified themselves 'belonging' to the organisation and 'having' to perform in particular ways. Nettleton (2006) suggests that social constructionism is now one of the most important strands when considering the sociology of health and illness. Pregnancy, from a

midwifery perspective is not considered an illness but rather a normal physiological event in a woman's life. This differs from the obstetric medical opinion that views pregnancy and birth as pathological events where the risk to the life of both mother and baby is high (Savage 2007; Scammell & Alaszewski 2012). Therefore, it was felt that by exploring professional midwifery practice through the lens of social constructionism it may be possible to gain understanding about the professional, legal and organisational frameworks that be impacting upon midwifery practice.

Traditionally, midwifery practice has been underpinned by a philosophy of recognising that pregnancy and childbirth are normal physiological events in a woman's life (Pathways for Maternity Care 2009; The Best Start 2017). However, as the demographic of pregnant women continues to change with more women who present for care being older (greater than 35 years of age), having raised BMIs and having more pre-existing medical conditions (McCall et al 2016), midwifery practice may have had to adapt and develop or be *re-constructed* in response to the particular physical and psychological needs of the pregnant women.

Social issues too, now play a dominant part in maternity care. Gender based violence, housing issues and drug and alcohol addiction now affect a large proportion of pregnant women (Coles et al 2016) and midwifery, medical and social work professionals are now expected to recognise such vulnerable families and to act upon this recognition to support the unborn baby within the family context. The 'Getting It Right For Every Child' (GIRFEC) policy (Scottish Government 2004) is the Scottish Government's national policy aimed at ensuring all children are safe and nurtured and can flourish in society. This policy was developed following recognition that health inequalities exist in Scotland and that there are poor projected health outcomes for children who currently live in poverty. These issues are clearly articulated in Coles et al's. (2016) article. One of the principle underpinning tenets of this policy is that of 'early intervention' aimed at supporting

children prior to a ‘crisis’ occurring. This understanding means that ‘GIRFEC’ is also concerned with protecting unborn children too and so inevitably impacts upon the midwifery service where midwives are expected to identify and support vulnerable parents. This policy and underpinning legislation therefore, suggests that it may be necessary to construct another set of professional traditions and practices. Discussion deemed necessary around social issues as described above might therefore compete for time with other health issues during antenatal appointments for some vulnerable women.

The last but the most important group of individuals that midwives need to interact with is the pregnant women themselves (and their families). Each woman is an individual and will undoubtedly have individual and specific needs, suggesting that midwifery practice needs to be person centred and specific to that particular woman. That is, placing the woman and her family at the centre of care and facilitating her in decision making with respect to her own maternity care pathway (The Best Start 2017). This placing of women and their families at the centre of their own care is central to the new model of maternity care currently being developed in Scotland (The Best Start 2017). This development of service suggests that midwives need to develop and adapt their practices in response to the individual needs of the families to whom they provide care and not in response to the needs of their employing organisation. The traditional role of the midwife is to promote ‘normality’ and to guide and support women through pregnancy, labour and birth and advocate for them irrespective of their medical or social needs, ensuring the safety for mother and baby at all times (Walsh 2017; Muthige et al 2019). However, in light of government policy and legislation, examples of which are mentioned above, the community midwifery role may now be diversifying and expanding to allow professionals to develop additional skills that have, until recently sat separately from traditional midwifery practice. These skills involve identifying vulnerable families and liaising with other appropriate agencies with a view to supporting such women and their unborn babies (Coles et al 2016).

Monitoring a normally developing pregnancy and promoting normal birth therefore, appears to be emerging as only one part of the remit of professional midwives as they support families who may also have a variety of health and social issues of which living with obesity may be one. Adopting this holistic approach to maternity care then, may see midwives practicing within the medical and social arenas as well as in their familiar midwifery one. As a result of practicing in this conjoined way with other specialisms, community midwives may be developing shared understanding and assumptions about what defines their unique role in 21st century Scotland and developing their practices accordingly. Changes in the pregnant population therefore, suggests that midwives may have had to redesign or *reconstruct* their practices as they engage with a population of women who are at risk of developing not just complex medical complications but social ones too, especially during pregnancy and in the postnatal period (The Best Start 2017).

Social constructionism has its roots in the social sciences (Franklin 1995; Burr 2015; Gergen 2015). It puts forward the theory that meaning is made for individuals as a result of their interactions with others and that these interactions lead to the development of cultural traditions (Gergen 2014). Gergen (2015) also talks about the language that is used and describes it as a 'game', he suggests that we use specific language that is relevant to particular situations and contexts and that as a result we make meaning and interpret words differently in each context. This theory of 'game of words' suggests therefore that individual groups and in this context, professional groups may all have constructed their own particular languages and that the meanings of particular words or phrases and behaviours that are displayed may differ in different contexts.

It is likely that the complimentary specialisms in which midwives now have a stake have developed their own traditions and language too as Gergen (2015) has suggested and this in turn may mean that community midwives have constructed their own particular traditions that sit

separately from their hospital based colleagues as they attempt to marry the traditions of several disciplines during antenatal appointments.

For the reasons mentioned above, it was felt that social constructionism was the philosophy that leant itself to the theoretical framework for this study because the aim was not just to gain understanding as to how midwives practiced in the antenatal context, it was to understand how they constructed their practices in relation to the more complex medical and social needs of the woman whilst remaining true to the traditional role of the midwife.

Exploring midwifery practice through a social constructionism lens has allowed practice to be explored with respect to how community midwives have collectively developed their practice with respect to the other related disciplines that are enmeshed in maternity care provision. It is thought that this will illuminate what the common language, practices and traditions are now seen within present day community midwifery practice in South East Scotland.

3.5 Research Design and Methodology

Methodology pertains to the debates that one may have had in order to plan and execute a research study. This is concerned with considering what the most appropriate study sample/population will be and how to gather data that will provide meaningful answers to the research question (Wellington 2010; Harding 2019). Therefore, the aim of this study was to explore and gain understanding as to *how* midwives construct their practices when raising and discussing obesity with women who live with a raised BMI≥30kg/m² in order to support them during pregnancy, paying attention to the contextual and professional position that they occupy.

The nature and underpinning philosophy chosen to be the foundation of this research lent it to one of a qualitative interpretivist design. Qualitative data collection is commonly concerned with

gathering data that are deep and rich and typically sample sizes are small (Smith et al. 2009; Rapley 2010; Harding 2019). The number of study participants was not pre-set for this study but it was expected that a population of between ten and fifteen midwives might be interviewed. In addition to interviews, study participants were invited to complete short reflective diaries illustrating how they had raised the topics of being overweight or obese with women who subsequently presented for antenatal care and how this made them feel in so doing.

3.6 Interview Research

During the last few decades, interview research has become a commonly seen method of choice (Brinkmann & Kvale 2015). It is a means of data collection that focuses upon language. Conducting interview research has advantages and disadvantages (Bryman 2004; Silverman 2011; Brinkmann & Kvale 2015). This type of research can be time consuming and can pose logistical challenges such as finding a mutual time and venue to conduct interviews, especially when one wishes to interview busy professionals. There are also ethical considerations to take into account such as confidentiality, consent and the uncovering of poor practice (Lewis 2003; Ryen 2011; Brinkmann & Kvale 2015).

Whilst interview research does not carry the same physical risks as a large randomised controlled trial that is investigating the efficacy of a new drug might, there may be consequences for the interviewee (Brinkmann & Kvale 2015; Roller & Lavrakas 2015; Harding 2019). Qualitative interviews are potentially intimate and the interviewer may stimulate the participant to raise issues that he/she may later regret (Bryman 2004; Ryen 2011; Brinkmann & Kvale 2015). Although the study being reported here was designed to explore professional practice, raw emotion may have been brought to the surface. Prior to the research commencing, the researcher should consider how to handle such eventualities (Lewis 2003; Bryman 2004; Ryen

2011; Brinkmann & Kvale 2015). Lewis (2003) explains that the researcher is not a counsellor or adviser and so must remain neutral. Professionals who participated in this research study were advised prior to the data collection phase as to what the nature of the research/questions would be and were advised that if they wished to, they could withdraw at any time without giving a reason. This is a measure of mitigating against any undue distress caused to participants.

Another ethical issue that may have arisen during the course of this research was one of safe practice (Parahoo 2014). It was important that the participant's anonymity was protected as far as possible but it also had to be borne in mind that professional people serve the public. To this end, it was important that professional practice was safe and safeguarded at all times and so it was important that attention was paid to undertaking effective ethical practice at each stage of this study (Brinkman & Kvale 2015) ensuring that processes were in place should any issues regarding unsafe practice been uncovered. Although there is limited risk for participants who choose to take part in interview research (Brinkman & Kvale 2015), there *was* a risk that unsafe or sub-optimal practice may have been uncovered during the course of the interviews. Had any unsafe practices been identified during the course of this research then these issues would have been addressed according to the safety protocol that was developed in agreement with the Chief Midwife in the area (Appendix 9). Addressing such eventualities would have activated the safety protocol and a stepwise approach to address any concerning issues would have been commenced. The first step in this process would have been to clarify the unsafe or sub-optimal practice that had been uncovered, identifying whether any additional education may be of benefit for individual practitioners, ensuring that their practice was corrected and that women and babies were not put at risk as a result. These corrective steps would have been taken in collaboration with senior clinical managers and academic supervisors ensuring that appropriate action was taken depending upon the severity of the concern. However, no sub-optimal

practices were identified during the course of this research and there was no need to activate the safety protocol at any time.

Another recognised risk of interview research is that of individuals disclosing information that they later may have later regretted. It was made clear to participants that they could stop the interview at any time without giving a reason in the participation sheet that had been issued prior to the interview commencing (Appendix 10) so that if this eventuality had occurred, participants knew that they were under no obligation to continue the interaction. However, if any interview had been stopped, permission would have been sought to keep and include any data that had been yielded up to the point of withdrawal because what had been gathered may still have been useful and relevant to the study (Brinkman & Kvale 2015). No such eventualities occurred during this research.

Despite these ethical responsibilities, face-to-face interviews have many advantages. The researcher is able to be aware of linguistical nuances, facial expressions and other body language (Brinkman & Kvale 2015). The interview is conducted in private and although it has been highlighted that individuals may disclose information they may later regret or they may become upset or distressed during the interaction, deep and meaningful data can be yielded from this situation that can assist in answering the research question (Lewis 2003; Bryman 2004; Ryen 2011; Brinkmann & Kvale 2015). Had such an eventuality occurred, discussion with the participant would have taken place as to how to proceed (King et al 2019) and there would have been discussion as to the clarity of the information given and additional consent taken as to what may or may not be included the final analysis. King et al (2019) suggest that this eventuality can occur in any interview research but is most commonly seen in healthcare contexts.

A disadvantage of interview research is that data yielded from this approach can be time consuming to analyse and as each interview requires to be recorded (with participants prior and ongoing consent), accurately transcribed verbatim and then analysed. Many unexpected themes and concepts may also emerge from the data that had not been previously considered, this may, in turn, cost the researcher additional time during the data analysis phase of the research.

A summary of the theoretical framework that was developed for this study can be seen in Table 2.

Table 2 Summary of theoretical framework used for this study

Ontology	A world of multiple realities therefore interpretivist relativism.
Epistemology	Social Constructionism
Methodology	To gather data that will enlighten how community midwives practice in the context of their position within the organisation and professional constructs in which they practice.
Methods	In depth interviews Reflective diaries

3.7 Participants

Pathways for Maternity Care (2009) makes clear that midwives should be the lead professional for all low risk women and should be involved in the care of all pregnant women even when complications/risks do arise (The Best Start 2017). Within the area of South East Scotland where this study was conducted, women who have had one positive home pregnancy test are

signposted to their local community midwife for care and it is this professional who undertakes the history taking, physical examination (including calculation of BMI) and risk assessment in partnership with the woman herself (Pathways for Maternity Care 2009). Principles of antenatal care include developing a positive relationship with the woman, monitoring the pregnancy, providing health education and promotion and empowering women to make informed choices about their health and that of their babies (Shepherd et al 2004). The booking appointment is the earliest opportunity (usually 6-8 weeks gestation) that the midwife has to discuss issues around the woman's health and lifestyle.

Community midwives are the professional leads in maternity care (Pathways for Maternity care 2009; The Best Start 2017) and they are ideally situated to give descriptive narratives as to how issues of being overweight or obese are raised with women during pregnancy and what it means for them to discuss this complex issue with women. As discussed in earlier chapters, being overweight or obese poses risks to both mother and baby and the community midwife is likely to be the first professional that women have contact with early in their pregnancy. The logical choice of participants for this study therefore, was from the population of community midwives who practice in one area of South East Scotland. The number of participants was not pre-set for this research but an initial estimate was that approximately ten midwives would participate. The total number of participants who did take part was thirteen and they were all self-selecting.

3.8 Interview Questionnaires and Practice Diaries

The interview questionnaire was informed by both the findings of the literature review and the philosophical framework chosen for this study. The dominant themes that arose

from the literature review pertaining to midwifery practice were those of reluctance in raising the topic, feeling ill equipped to do so and that they lacked proficiency in giving advice about diet and nutrition (Schmied et al. 2010; Heslehurst et al. 2013; McLeod et al. 2013; Foster and Hirst 2014; Singleton and Furber 2014). Findings from the review also suggested that where well defined protocols existed, confidence amongst professionals was increased and more information appeared to be given to women (Biro et al. 2013; Wilkinson et al. 2013). The role of midwives with respect to the public health role was also of interest (Ross-Davie et al. 2006; McNeill et al. 2012; Murphy et al. 2016; Murphy et al. 2015) and has been recognised as an intrinsic part of the community midwifery role.

The aim of this study was to explore how midwives developed their roles with respect to all of the above mentioned themes. Therefore the interview schedule was formulated with this in mind. Initially a topic guide was developed (Appendix 12). This allowed thoughts to be focused about what specific questions would be asked of participants. Every effort was made to keep questions open in order to allow for the participants to use their own words and not be 'led' during the interviews (Legard et al. 2010; Brinkman & Kvale 2015). The finalised interview schedule was developed in sections as can be seen in Appendix 13. However, as is the nature of conversation, not all of the questions were posed in the given order (Brinkman & Kvale 2015). Participants often unwittingly moved from one topic to the next without probing. Despite this, all topics were explored in every interview and saturation was eventually met.

The practice diaries that were issued to participants were designed to allow the midwives to reflect upon three care episodes that they had had with pregnant women who lived with a BMI≥30kg/m² (Appendix 16). Four questions were posed for each care episode and they pertained to prior knowledge of the woman, enquiry in to how the midwives felt on calculating a raised BMI, any behaviours that the woman may have displayed which either supported or inhibited further discussion. The last question enquired about midwifery behaviour and whether, if presented with the same situation again, they would change their practice. These questions were again based upon the findings of the literature review but were also guided by curiosity as to how the midwives practiced in the context of their professional situation. These diaries had the potential for thirty-nine episodes of care to be reflected upon.

3.9 Trustworthiness of this Qualitative Research

Qualitative research is concerned with developing the meaning and understanding of events (Quinn Patton 2015) as opposed to the objective measurements that are sought by using quantitative methods however, there is still a need to ensure that the research approach has been rigorous and transparent and that the findings are dependable and credible. The terms, 'credible' and 'reliable' have been suggested by Bryman (2004) as being more fitting to qualitative research rather than the more traditional ones of validity, reliability and objectivity that are commonly seen in quantitative studies. The term 'trustworthiness' has been suggested by several scholars (Bryman 2004; Robson & McCartan 2016) as a term that encompasses all of these elements.

As mentioned earlier, qualitative research is not concerned with objective measurement, however, there still needs to be a level of objectivity where the researcher has been seen to 'act

in good faith' (Bryman 2004, p 276) and to not have imposed personal values on the research. Confirmable findings were achieved by practicing in a critically reflexive manner (discussed later in this chapter), by developing this skill in the context of conducting research and maintaining some distance from what the participants were saying during interviews assisted in stepping aside from a primary midwifery role and into a healthcare researcher one and mitigated against biased and leading questions. This did however take time to develop and during early interviews, some leading and perhaps biased questions were asked of the participants, however, academic supervisors drew attention to this early in the data collection phase of the study and this assisted in guarding against this type of question as the study developed. Attention was subsequently given to the questioning technique and the questions used; critical reflexive practice facilitated recognising when closed questions were being put to participants inadvertently and this was often corrected during the course of the interview. Closed questions however, are often useful in a clinical practice context in order to elicit specific information about individuals' health quickly (Bharj & Daniels 2017).

Bryman (2004) suggests that the term 'credibility' is parallel to validity when referring to qualitative data, by this he explains that the findings that one has uncovered are accurate and answer the research question/s. One way of achieving this is to ask the participants to confirm or verify the findings from the study. Ritchie and Lewis (2003) refer to this as respondent validation. Due to the pragmatics of time constraints on both the researcher's and the participants part, this was not achieved, however, during each interview the participants were asked at various intervals to clarify any points that they had made to ensure accuracy of understanding, this mitigated somewhat against the risk of inappropriate meaning being attached to some of the data. Qualitative research is inductive in nature (Mason 2015) and so different researchers may attach different meanings to the same data, however, in this case only one researcher was responsible for the data collection and analysis. This mitigated

against the risks of inappropriate or different meanings being attached to the some of the data, and risked there being 'fixed ideas' when some themes emerged. Academic supervisors, however, assisted in reducing this risk and ensured that all ideas and meanings were appropriately discussed, questioned and considered. This constant interrogation of the data and of the findings ensured that the meanings attached to each datum were as true to the participants' accounts of their experiences as possible.

Trustworthiness is a term that Robson & McCartan (2016) explain and asks how one knows that the findings from a particular study can be trusted and whether or not they are transferable to other populations. This study specifically explored midwifery practice in South East Scotland but it was exploring a topic that is of global concern, namely, professional practices with respect to counselling pregnant women about their raised BMIs and their diet and nutrition. Whilst some of the findings appear to have resonance with other studies (discussed in chapter 2), others may only be relevant to UK contexts where midwifery care provision is similar across the country. The findings that pertain to informing education (Chapters 4 & 5) and specific midwifery practice however, may be of relevance to maternity caregivers both nationally and internationally.

3.10 Ethical Considerations and Permissions

Ethical considerations are concerned with maintaining the safety and dignity of research participants, the safety of the researcher and to ensure that the proposed research is worthwhile and will make a contribution to a specific body of knowledge (Guba & Lincoln 1981; Ritchie & Lewis 2003; Bryman 2004; Parahoo 2014). Informed consent, confidentiality and traceability,

safety and data management and data storage were all carefully considered with respect to this research in order to meet research governance standards within the UK.

Following discussion with research ethics advisors, it was confirmed that NHS ethics was not required because members of the public were not being invited to participate in this study. Ethical approval was granted from Queen Margaret University and from the appropriate R&D department (R&D reference 2017/0316) (Appendix 8). Potential study participants were approached after this approval, this took the form of emailing (NHS secure system) the team leaders and arranging a visit to local community midwife hub offices early in the morning before the working day began. The research was introduced to the midwives who were on duty that day and hard copies of participation information leaflets (PIL) were distributed (Appendix 10). Additional hard copies of the information leaflet were left in the offices and made accessible for those midwives who were not present at the time of initial distribution. Contact details were collected from those midwives who indicated that they were willing to be receive further information about this study at a future point. After one week, the midwives were contacted again by email (NHS secure system) and asked if they would be willing to participate in this research. When a positive response was received, a mutually convenient time and venue was arranged in order to conduct the interview. All of the interview venues were located in the midwives place of work to reduce inconvenience for participants. If there was no response from participants initially, a second email was sent after another week with an electronic copy of the PIL. If there was still no response or if an individual declined to take part in the study then no further contact was made other than a short email thanking them for their time. In total, thirteen midwives agreed to take part in this research study, others did volunteer but this was after the end date that had been agreed with the R&D department, rendering these offers ineligible. These midwives were contacted by phone or email and thanked for their interest.

Participants were invited to give their informed, written consent prior to any interview commencing (Appendix 11 – consent form), they were given a copy of the signed consent form to keep for their records and another copy was kept in the research file. Prior to any interviews commencing, the content of the consent form was discussed in detail to ensure that participants were comfortable about taking part in the study and were made aware of the commitment expected of them; they were made aware that they could withdraw from the interview/decline to answer any question without giving a reason. These procedures were in keeping with research governance practice in the UK and is underpinned by the Declaration of Helsinki (Parahoo 2004). Should audio recording not have been acceptable for any participant the option of being interviewed and having notes taken instead was offered, similarly if a participant wished to disclose confidential information then there was an option to suspend the audio recording for that section of the interview and extensive notes taken instead. This was not required for any of the interviews that took place.

Confidentiality pertains to the participant not being identifiable during the research process; it also refers to what may be done with the findings once the research is complete (Lewis 2003; Brinkmann & Kvale 2015). During this study, no conversation was entered in to with either clinical or academic colleagues about individual participants. Names of participants were never used and the completed consent forms were stored in a different place from the interview transcripts to further reduce the risk of traceability. In the process of an interview where data are being generated from a particular population, as was the case here, total anonymity may not be possible. The mention of specific geographical areas or events may also risk anonymity and confidentiality (Brinkman & Kvale 2015). For these reasons, participants may not have been agreeable to have their quotes published and may have perceived this as making public what was given in a private interview (Lewis 2003; Brinkmann & Kvale 2015). However, participants were made aware of the intended use of any such quotes via the information leaflet and this

was made explicit again at the time of the interview, it was explained that every effort would be made to reduce the risk of traceability in order to preserve participants' identity. During the reporting of this study every effort was made to avoid discussing specific incidents however, when this was felt necessary in order to demonstrate specific points, individual participants were contacted personally in order to discuss these issues and to gain additional verbal consent (or not) prior to using any quotes that may have risked anonymity. None of the midwives raised a concern about this aspect of the research.

Lone travelling to various destinations in order to meet participants was necessary for this research. Interviews took place during normal office hours (8.30am-5pm) and they all took place in GP practices or other healthcare facilities where the midwives worked. Next of kin and academic supervisors were made aware of the timetabling of interviews and the researcher was contactable by mobile phone at all times. Safety risks are considered to be minimal for this study. Lone working practice was undertaken with respect to the Queen Margaret University Lone Working Policy.

All data and research documentation were securely stored in accordance with Queen Margaret University (QMU) Research Data Management Policy (2015). Completed consent forms were kept in a locked drawer in the Nursing Division at Queen Margaret University and were stored separately from hard copies of the transcripts of interviews and practice diaries. Interviews were recorded on a study specific password protected device; electronic transcriptions were kept on a QMU password protected computer as were separate documents containing quotes. Hard copies of the interview transcripts were used only by the researcher, academic supervisors and any other experts who assisted with data analysis. Similarly, any coding sheets were stored in another separate locked drawer in a locked office within the university. No conversation was entered into regarding the data that had been gathered outwith the research context.

3.11 Critical Reflexivity

Pillow has suggested (2010) that reflexivity means having an awareness of self and others throughout the research process and according to Finlay and Gough (2003) should allow for deeper insights into both the personal and social experience. Mason (2002) expands this by saying that reflexive practice is a process whereby the researcher constantly raises awareness of issues and questions that may arise within the research process and then addresses them. Engaging in reflexive practice was initially found to be challenging but has been ongoing throughout the design, execution and data analysis of this study. Previous roles as research midwife and specialist midwife providing care to obese pregnant women and my concurrent roles as clinical midwife and doctoral student have facilitated deep and clear insight into both the role of the midwife and detailed knowledge and understanding about research practice, governance and research design, particularly quantitative research design. Although this insight was at times beneficial, particularly in gaining access to potential participants for example, this background knowledge also posed a risk to the study. One of the main risks was that the research focus slipped away from a qualitative design/perspective into a more familiar positivist one and that my deep rooted professional clinical knowledge would influence me to lead participants during data collection interviews and then, during the data analysis phase to make assumptions about the data that were generated.

Unlike a positivist approach to research, where researchers aim to keep an objective distance from what is being investigated, qualitative research is located in the world of those being studied (Finlay & Gough 2003; Denzin & Lincoln 2005). This means that there is little professional distance between the researcher and the participants and in this case, a colleague or 'insider' researcher was carrying out the research. This meant that during the data collection

phase of the study I had to maintain awareness that I was present as a researcher but with professional knowledge of midwifery rather than as a midwife with knowledge of research practice. This is what Pillow (2010) refers to as self-reflexivity and is concerned with attention to how the researcher's identity may affect the research. As the research developed therefore, I became aware of my propensity to ask 'closed' questions about specific clinical scenarios.

Conflict did arise between my thought processes as a professional midwife and that of a researcher. I, like my midwifery colleagues am embedded in the clinical NHS culture and have insight into the challenges and opportunities that exist in the day-to-day context of practice. Whilst this insight could be and often was utilised effectively, there was a risk that these personal experiences, assumptions and knowledge may have 'clouded' my thinking in how the research was designed and how any data generated were analysed and interpreted, there was also a risk that key messages may have been missed. An example of this, was that during the data analysis phase it became clear that the use of closed questions had, at times 'closed down' a topic that may have been beneficial to explore more deeply. As this research study developed, it became clear that it was necessary to remain critically reflexive in order to minimise these risks and recognise the difference between my healthcare researcher role and my midwifery role. It was important that any points of interest were clarified and expanded by the participants and in their own words and that no assumptions about the narratives were made by me.

Although critical reflexive practice was an approach that I strived to maintain during the planning phase of this study, it became apparent how challenging this was during the data collection phase. The participants had all been known to me professionally for some time but I have never practiced as a community midwife and although the philosophy of midwifery practice and the cultural context was common to all of us, I was largely ignorant of the entirety of the community

midwife's role. In the context of undertaking this research, this was a positive thing because I needed clarity as an outsider as to what the participants were saying or alluding to rather than making assumptions. Despite this attempt to 'distance' myself from practice, my proximity to the research topic can be seen in the earlier interview transcripts. During these early interviews, assumptions *were* made at times, however, after reading the transcripts and by utilising *reflective practice*, it became easier to 'jump' in and out of the roles of midwife and researcher.

As my grasp of critical reflexive practice developed, so too did my recognition of my role as a healthcare researcher and this is more visible, I believe, in the later interview transcripts. The interviews themselves began to last longer and participants were invited to clarify points to me by using questions such as 'tell me more about that?' or 'tell me what an appointment looks like?' However, a challenge with respect to reflexivity came from the participants themselves; as a result of professional contact, they knew who I was and what my previous roles had been and they made assumptions about *my* knowledge of *their* role. This realisation and understanding necessitated me to remind them that I was present as a healthcare researcher and asked them to 'forget' that I had knowledge of midwifery practice and to be explicit in their explanations of events within their practice.

Continuing critical reflexive practice was challenging throughout the data analysis phase of the research. Due to my clinical role and my previous research role, it initially appeared that I naturally lean towards a positivist paradigm. However, having gathered data from many diverse individuals and having a belief that there may be more than one 'truth' or 'reality', as discussed above, there was again a risk that the findings may be interpreted in a positivist way rather than exploring the linguistical nuances that were contained in the transcripts. It was suggested by academic supervisors that I should 'step to the side of the data', and observe and analyse them as a social scientist might rather than from the perspective of a clinical midwife. Understanding

how I had originally attempted to observe and analyse the data assisted me in shifting my perspective from one of midwife to social scientist, a perspective that was new to me. Altering my approach to the data was a key learning point on this doctoral journey and was pivotal in allowing me to understand that the data needed to be interrogated from the perspective of the social sciences, specifically social constructionism, rather than as a midwife.

3.12 Data Analysis

Qualitative data analysis has been described as a means of reducing or simplifying large quantities of data and of re-ordering them in a way that is meaningful (Miles & Huberman 1994; Gibbs 2007; Harding 2019), it is a continuous iterative process that is ongoing throughout the research process beginning at the data collection phase of the study. Spencer et al (2003) have described this stage in the research process to be both challenging and exciting but they also recommend diligence when approaching data analysis. Data from this study were analysed thematically and the process was undertaken using a seven stage iterative approach, a summary of which can be seen in box 2. The underpinning philosophy for this study as discussed earlier was social constructionism; this theory asserts that people develop language, traditions and behaviours as they interact with their contextual situation and others who are in a similar situation (Gergen 2015).

Table 3 Stages of data analysis

Stage of analysis	Progress of analysis (Descriptive to analytical)
1.Transcripts made	To allow familiarisation with the data
2.Transcripts read and re-read	To allow for an overview of the findings/themes that were emerging.
3.Colour coded in the hard copies and preliminary themes identified	Four dominant broad themes identified.
4.Uploading of transcripts in to NVivo 10 computer programme	Original highlighted excerpts assigned a category or node. Nodes expanded and the data were interrogated again with a focus on observing for differences and similarities in views and practices.
5.Line by line analysis observation of the transcripts	Observing for linguistical nuances that allowed for deeper understanding and meaning to be elicited from the data.
6.Preliminary themes identified	Four themes identified pertaining to practice, organisational expectations and societal change.
7. Return to hard copies to re-engage with the data. Line by line analysis repeated observing for language, context and tradition	Three overarching themes identified

With respect to this study, the data were analysed by observing them from a social science perspective to explore several constructs that appear to exist within maternity care. The traditional role of the midwife, it can be argued, is itself a social construct. Individuals have entered a graduate profession and have earned the right to practice professionally by a governing body in which professional governance and frameworks exist to guide this group of professionals in their chosen careers. Midwives therefore share common ground in terms of their professional goals, language and traditions. The data that were gathered were analysed with these principles and theories in mind but also with an awareness that other constructs may be at play. For example, individual midwives may construct their own practices to suit particular

clinical situations and these practices may differ from that of their colleagues. The employing organisation may also have 'asked' midwives to construct practices depending upon its expectations and understanding of the midwifery role and of its strategic goals. It was important therefore, to keep this understanding of social constructionism theory at the forefront of one's mind as this more intense phase of data analysis continued.

The data that were yielded were prepared in a similar way. Only seven diaries were returned giving a 53% response rate and within these diaries twenty-two episodes of care were reflected upon which gave a 56% response rate. The data in the diaries was less plentiful than that yielded in the interviews, nevertheless, interesting insights into practice were still gleaned from it.

3.13 Data Preparation

Gibbs (2007), Brinkman & Kvale (2015), and Harding (2019) suggest that although some initial ideas may have been formed during the data collection phase of the study, data preparation is necessary prior to beginning the more formal phase of data analysis. The first stage in preparing the data gathered for this study was to transcribe the interviews verbatim, transforming them from audio recordings to electronic documents. The practice diaries were scanned into the computer system and then prepared in the same way as the interview transcripts.

Although a time consuming task, this brought with it advantages, and allowed for a deeper level of familiarity with each interview and the preliminary ideas that had been developing during the data collection phase of the study began to develop and grow to a deeper level. Brinkman & Kvale (2015) explain that 'transcribing' changes the interview from being an audible interaction to an electronic or paper document. They go on to suggest that some of the intrinsic contextual

and linguistical detail such as tone of voice, facial expressions and body language are no longer visible. This was important because as discussed earlier, social constructionism is a theory that believes behaviours and traditions are concerned with the interactions individuals have with their own world and the people in it with whom they interact. By observing and considering behavioural and conversational idiosyncrasies that occurred during the research interviews, it was felt that understanding the contextual situation in which midwives find themselves operating was achieved to a deeper level.

The research interviews were transcribed verbatim as soon as was practically possible following each interview by the researcher who included the linguistical and contextual detail in the transcript. The memories were fresh and details such as pauses, laughs and the non-verbal contextual nuances that occurred within the interviews were included. This opportunity to transcribe the interviews enabled constant and consistent engagement with the data by the researcher prior to data analysis.

The full data set consisted of thirteen interview transcripts and corresponding field notes, seven practice diaries and another notebook of field notes that were made as the study developed. The data from the practice diaries were approached and interrogated in the same way as the interview transcripts.

3.13.1 Stage One – Initial Reading of the Transcripts

Gibbs (2007) suggests that one can work with hard copies, electronic documents or a combination of both. The analysis decision for this study was to combine the use of both hard copies and the use of the computer programme, NVivo10. Analysis began by working with hard copies of the transcripts.

The first stage in the analysis was to read and re-read the documents to allow for thorough engagement in the data and to develop a sense of broad themes that appeared to emerge from the data. The transcripts, diaries and field notes were then re-read and comprehensive notes made in the margin, looking for the linguistical and practice nuances that existed. During this first stage of analysis, there was more detailed interrogation of the data and relevant excerpts of each interview were highlighted using coloured pens as a means of identifying the preliminary codes.

This process allowed for some of the broad descriptive themes that were emerging to be identified (King et al. 2019). The various transcripts and diaries were interrogated and similarities and contrasts across the various participants responses, views and experiences were noted. This initial stage of analysis formed the foundation for the ongoing analysis of the data. Following this stage, a basic document was developed that illustrated these initial descriptive codes.

3.13.2 Stage two – Line by Line Interrogation of the transcripts

Stage two of the analysis made use of the computer programme NVivo10. A personal goal that had been set during this doctoral journey was to become conversant in the use of analytical software. Using this software, therefore served two needs, one was to assist in analysing the data and the second was to further develop qualitative data analysis skills using available technology.

The interview transcripts were transferred into the NVivo 10 computer programme and the aforementioned line-by-line analysis continued. This allowed for a much closer interrogation and observation of the data, observing again for linguistical nuances as well as any specific language or terms that participants used, that could provide insights into the way that meanings was constructed by the participants. During this phase of analysis, Gibbs (2007) recommends

that the researcher becomes more analytical and inductive, rather than just developing descriptions of what is or has been occurring. Observations and interpretations were made with respect to professional practice that appeared to be *constructed* by the midwives in relation to the pregnant women themselves and their specific needs as well as other professional groups that they relate to. It was important to observe for these examples of interaction within the transcripts rather than making assumptions about midwifery practice.

Following this phase of analysis, an index of codes or 'nodes' was developed using the NVivo programme (Appendix 15). The already highlighted excerpts from the hard copies of the interview transcripts were assigned to codes or 'nodes' in the computer programme which were descriptive in nature, Miles & Huberman (1994) explain that coding refers to the labelling of relevant parts of the data in a structured way. From this standpoint the original codes were reviewed and the analysis continued in this iterative way moving from one point to another as Spencer et al. (2003) suggest from one 'viewing platform' to the next and if necessary, back again. This stage again involved engaging in the transcripts, observing for different clinical scenarios, geographical locations and experience of the midwives but on this occasion, there was a need to understand *why* some midwives appeared to approach clinical situations differently from colleagues. There was also careful observation about the organisational context that the midwives found themselves in and the expectations placed upon them by the organisation, allowing for consideration as to how this may have influenced their professional performance.

This engagement with the data was ongoing and the themes continued to be developed. Engagement and interrogation of the data continued and preliminary themes began to emerge and develop as the process continued. This allowed for preliminary themes to be identified. Data from the practice diaries were interrogated in the same way as the interview data. These

data however was less plentiful and less explicit with all of the participants making use of bullet points and giving brief comments in answer to each question. Nevertheless, these data provided interesting insight in to midwifery and consultation practices.

3.13.3 Stage three – Identifying Overarching Themes

King et al. (2019) suggest that the final stage in the analysis is to identify the overarching themes from the data, and that these overarching themes can then be applied to the theoretical framework on which the research study was built. In this case, social constructionism; a theory that asserts that the interactions individuals have with each other and with their environment develops understanding and creates cultural traditions and norms as discussed earlier in this paper (Gergen 2015).

Midwives occupy a unique place in healthcare; they are not, in the main, caring for sick people whose health has been negatively altered. According to the underpinning philosophy of midwifery, they are providing support to healthy young women and monitoring a normal pregnancy; however, in the context of NHS maternity provision, it appears that midwives have a much more complex task than just monitoring a pregnancy. They are part of a large multidisciplinary team and, as discussed earlier in this paper exist in a complex web of organisations (page 7). It was important therefore, to be mindful of the contextual situation in which midwives operate with respect to their own governing body, the obstetric medical paradigm that they appear to negotiate within, the needs of the women themselves and the expectations that are laid upon them by the employing organisation. This understanding of the midwives contextual situation and of the responsibility they have to the women in their care and to their professional body led to the realisation that the data needed to be interrogated once more in a more detailed and deeper way.

3.13.4 Stage four – Deeper interrogation of the data

The complex situation in which midwives practice and the skills required to successfully negotiate these complexities, necessitated further interrogation of the data in order to reduce them further and illuminate specific themes relating to the contextual situations that midwives operate in more thoroughly. This consisted of a return to the hard copies and using a thick pen, specific language, behaviours, rituals that midwives used during antenatal appointments were identified and blocked off, for example, with respect to performing additional investigations for women who presented with raised BMI≥30kg/m², the phrase 'I have to……' was often used (see page 90). Particular attention was also paid as to how the midwives appeared to view their role in these specific situations and whether one could discern if these behaviours were constructed in relation to an apparently obstetric medical or midwifery paradigm. During this stage of analysis it was also felt important to interrogate the data in an attempt to discern whether midwives included the women themselves in decision making with regard their own care during pregnancy or not and what any influencing factors in their behaviour may have been. Clinical issues and scenarios were observed for within the transcripts that appeared to demonstrate *how* the provision of midwifery care was constructed and delivered to women by the midwives and what the specific language and behaviour was used in conveying healthcare messages to women. This deeper interrogation of the data allowed for deeper meaning to emerge from the data and from this stage, the initial themes were further developed and the eventual decisions were made with respect to the overarching themes that emerged. These were:-

- Constructing partnerships with the women is a key aspect of providing midwifery care.
- The complex situational context in which midwives operate causes tensions and conflicts for midwives.

- Midwives are expected to be public health agents in addition to providing midwifery care.

3.14 Conclusion

This chapter has discussed and explained the research design and the underpinning theoretical philosophies on which this study was based. It was felt that the most appropriate paradigm in which to situate this research was an interpretivist one and it has aimed to explore midwifery practice from a social constructionism perspective, observing how the contextual position of midwives within a vast and complex organisation that encompasses several professional groups may influence midwifery practice. Data analysis was carried out thematically and was done in several stages, moving from descriptive themes to abstract overarching themes. The software programme NVivo 10 was utilised to assist in this process.

Finally, this chapter has discussed the practice of critical reflexivity which was, and continues to be a developing skill, it assisted in allowing the data to be observed from the 'side' and to view the midwife's role and the research data from the perspective of a social scientist and not from that of a practicing midwife. The next chapter discusses and demonstrates the findings from this research.

4 Findings

4.1 Introduction

This chapter opens with an overview of the characteristics of the participants who chose to participate in this study, and the particular geographical areas in which they practice. It goes on to explain what the key findings were and demonstrates how these findings were arrived at and developed following a thorough interrogation of the data from the perspective of social constructionism.

4.2 Characteristics of the midwives and data collection time scale

All of the midwives who chose to participate in this research were community midwives who practiced in diverse areas within a major city in the South East of Scotland and surrounding areas. Thirteen midwives took part in the research, all of whom were women and their length of experience varied from 1 year to 36 years with the average length of practice being 10.1 years. Eleven of the midwives practiced within the city[4] and two in semi-rural areas[5]. The midwives who participated worked in a range of affluent and socially deprived areas in and around the city giving an insight into the different populations that co-exist. The interviews lasted between 19 and 64 minutes with the average length being 44 minutes long. The shortest interview was conducted early during the data collection phase of the study when interview research skills were still raw and being developed. Despite this somewhat limited exchange, valuable data were still yielded. A summary of the professional characteristics of the participants can be seen in box 3. Data were collected between January 25th and May 3rd 2018. All of the interviews were audio recorded with participants' prior and ongoing consent and then transcribed verbatim.

[4] Inner city areas consisting of both affluent and socially deprived areas. The populations of each area ranged between 20,000 and 50,000 inhabitants

[5] Small towns that are situated outwith the city boundary, the populations of which consist of 10-12.000 inhabitants. These areas include remote and rural areas and the midwives practiced in socially deprived areas.

All of the participants were invited to complete a short reflective practice diary following an appointment they may have had with a woman who attended with a BMI ≥30kg/m². After one calendar month, participants were contacted by email (NHS secure system) and asked if this document had been completed. If so, it was personally collected to reduce the risk of being lost in the post. However, some participants chose to send their diary back to the university office despite this advice. No documents were lost. Some participants indicated that they would complete the document and notify the researcher. However, when these participants were followed up to enquire about individual diaries, participants explained that the document had not been completed. The content of the diaries was incorporated into the thematic analysis of the interview transcripts but largely, the findings from the diaries reiterated the findings from the initial literature review:- that midwives found time constaints a challenge, wanted to avoid offending the women and felt they lacked the appropriate knowledge and skills to counsel women abou lifestyle issues.

Table 4 Summary of participant characteristics

Participant Name	Length of Community Experience	Area of Practice
Anna	15 years	Urban – mixed deprived and affluent population
Beth	17 years	Semi-rural – mainly deprived population
Catriona	4.5 years	Urban – mixed deprived and affluent area.
Denise	1 year	Urban – mixed deprived and affluent area.
Elaine	14 years	Urban – deprived area
Frances	25 years	Rural – deprived area
Gaynor	17 years	Urban – deprived area
Heather	4 years	Urban – affluent area
Issy	6 years	Urban – mixed deprived and affluent population
Julia	5 years	Urban – mixed deprived and affluent population
Kat	20 years	Urban – mixed deprived and affluent population
Linda	1 year	Urban – deprived area
Mandy	3 years	Rural – mixed deprived and affluent population.

*

4.2.1 Findings

Three major themes were developed as discussed in the previous chapter from the data pertaining to antenatal care in its current form:-

- Midwives are situated in a complex, contextual position that may impact upon practice.
- Midwives appear to strive to construct relationships and partnerships with pregnant women.
- Midwives appear to be expected to function as public health agents concurrently with their midwifery role.

Sub-themes or concepts were developed and this informed the development of the three main themes that were developed. A summary of these can be seen in box 4.

Table 5 Summary of the themes and sub-themes that were developed from the data

Main theme	**Situational context of practice**	**Constructing relationships and partnerships with women**	**Midwives as public health agents**
Sub themes 1	Blending the paradigms of midwifery and obstetric practice	Developing an effective partnership with women.	Mode of delivery (public health messages and messengers)
Sub themes 2	'The protocols say' – risk to exercising professional judgement	Information exchange between midwife and woman.	"I think they want us to give everything priority"
Sub themes 3		I just don't know! (enough about the topic)	"[Feeling] so time constrained." Time constraints leading to being unable to hear the woman's full story

4.2.2 Theme 1 – Situational context of practice 4.2.3 Sub-theme one – Blending two paradigms

As discussed earlier, midwives appear to exist and operate between paradigms (Scammell & Alaszewski 2012). One of these paradigms, the midwifery one, is underpinned by a philosophy of normality and promotes normal birth, viewing pregnancy and childbirth as normal physiological events. The alternative one that gained momentum following the inception of the NHS in 1948 was a medicalised model of care that viewed pregnancy, labour and birth as pathological putting women and babies at risk (Schmid 2011; Davis 2013). Modern maternity care however, strives to deliver maternity care in the context of multi-disciplinary care provision including midwives, obstetricians, anaesthetists and other professional groups and aims to involve the women themselves in decisions regarding their own care (Donnison & MacDonald 2017).

Midwives are now the lead carers, and often first contact for all pregnant women (as discussed on page 6) (The Best Start 2017), and they are expected to offer appropriate advice to, and guide and support women including referring them to medical and obstetric colleagues in order to ensure that they receive the most appropriate care for their individual needs. However, this medical input may not be the desired option for some women and may cause tension between the midwife and the woman. Despite this challenging position however, the traditional role of the midwife as advocate (Wylie et al. 2011) and supporter of the women appears to be a central tenet when providing effective midwifery care for pregnant women as can be seen from the following quote:-

"…You have to get their trust, you have to get their respect as the midwife for that first appointment and you can engage them and feel and they think that you're of value to them as

the midwife and that you're educating them and you can ***give them good advice*** *then you're* ***on their side*** *and they'll come back but if you alienate them at that first appointment and start lecturing them and you know…"* (Frances, 25 years' experience)

However, when providing care for women who had a BMI≥30kg/m², some participants appeared to construct their practice from a medical obstetrical perspective and a hold a belief that the additional investigations that have been recommended in order to provide additional surveillance (for safety purposes) were prescriptive rather than being advisory. There was a sense that although participants were keen to construct meaningful relationships with the women they were also aware that they had a responsibility to carry out these investigations and procedures following discussion with and gaining the woman's consent in accordance with the local obstetric protocols. This more prescriptive approach to care is demonstrated in the following quote:-

"...Yes, yes, because it's not me having a pop at you. It's me being told this is what ***I have*** *to do by clinical guidance from the hospital. That makes them go '(name's) not having a pop at me and saying I'm fat'…"* (Elaine, 14 years' experience)

In addition to the above quote, the phrases ***'have to'*** and ***'need to'*** were frequently identified in the interview transcripts as having been used by the midwives in the context of discussing care provision with respect to additional tests, investigations and referrals. This language suggests that on occasions where closer monitoring of the pregnancy may have been clinically indicated, midwives may have been acting as conduits to deliver care within a traditional obstetric

paradigm, rather than appropriately discussing these issues with women and offering the rationale as to why these additional measures are recommended:-

*"…**we have** to say at booking. 'Right OK, your BMI is over 30 and our protocol is that anyone with a BMI over that **we have** to look at doing additional testing'…"* (Beth, 17 years' experience)

In addition, some midwives referred to the women as ***'patients'***, a word that may imply, in this context, that the women were passive recipients of care rather than decision makers in their own right. Why some midwives referred to women as patients remained unclear.

This apparently more prescriptive approach to care appeared to come from a place of concern rather than that of control with the midwives recognising that the women who had a BMI≥30kg/m² were potentially at increased risk of complications arising and that additional screening may go some way to ameliorating such risks. For example, when one midwife was asked how she felt when raising the topic with women, she confirmed that she did not mind raising the issues that surrounded having a raised BMI, believing that this was of benefit to women who were at increased risk of complications and that the intention was to prevent complications before they arose, inferring that this would promote safety for both mother and baby :-

"…I don't actually have a problem with it [discussing having a raised BMI] because I feel really it's a benefit to them that eh…..I think it's a benefit to them in that we…….because they are at huge risk, that we can hopefully reduce this risk and that we'll pick up problems sooner rather than later…" (Anna, 15 years' experience)

Although some of the local protocols pertaining to maternity care (Obesity Protocol, Appendix 11), appeared to facilitate practice in what appears to be a prescriptive way in order to gather relevant information, these same documents also appeared to serve another role for professionals; that of providing 'permission' to open conversations about the issues of being overweight or obese. Utilising the protocols in this manner is demonstrated in the following quote:-

"…Basically with the women with a BMI of over 30 but under 40, em, I use the diabetic thing as my way in [to raising and discussing the risks of having a raised BMI]. Certainly some women are a bit more receptive than others and I just say this is what I'm told to do and I do use the same message…" (Elaine, 14 years' experience)

Another participant, when asked if the local protocols pertaining to obesity (Appendix 11) made it easier to open the conversation about weight responded positively as can be seen in the following quote:-

"…Yeah, I would say it definitely has opened it up, em, because instantly at that first appointment you're discussing BMI and risk and therefore it does pick up the question of 'well what can I do' from the woman's perspective so the conversation is there…" (Heather, 4 years' experience)

These findings suggest that some of the protocols currently used in maternity care (RCOG 2018) may positively influence midwifery practice and facilitate midwives in raising

conversations pertaining to lifestyle choices with the women who present for care and who live with a raised BMI≥30kg/m² at the first booking appointment. This positive influence suggests that explanation may then be given to women with respect to the potential benefits of limiting gestational weight gain (GWG) and increasing physical activity as the evidence suggests this may reduce complications arising during the pregnancy, labour and birth (Jewell et al. 2014; McGiveron et al. 2014; Ronnberg et al. 2014; Haby et al. 2015). However, they also suggest that there is an overlap between the boundaries of medical obstetric and midwifery practice. This suggests that midwives may be operating and negotiating across paradigms, ensuring where possible that 'normality' is promoted but also that there is ongoing attention paid to risk assessment for individuals and that women are kept well informed and have the chance to discuss with their care providers any decisions that are made pertaining to their particular maternity care.

From the perspective of social constructionism, the above quotes suggest that two separate dialogues; obstetric medicine and midwifery, are being blended and reconstructed under the banner of 'midwife appointment'. This finding suggests that community midwives are constructing an opportunity to promote woman-centred dialogue that is a unique feature of community midwifery practice and one that apparently combines both the 'language of obstetric medicine' and the 'language of low risk midwifery care'. The following quote demonstrates how some midwives appear to be achieving this blend of the two languages and simultaneously acknowledging the woman's risks but being positive about how risks can be moderated:-

"…Yeah, em, I mean I certainly would try and support them so listen, listen to their fears, listen to their concerns but then try to put it into perspective of why the doctors are saying what they're

saying and try and turn on its head, 'right we know these facts so how can we make this positive, how can we look out for these risks and how can we prevent them from happening?' And trying to sort of overall show and demonstrate that what we're trying to do is protect you and your baby and help you and have the most successful outcomes that we can but we need to put all the cards on the table… (Issy, 6 years' experience).

Despite this sensitivity and positive approach, many midwives still appeared to look to the medical obstetric protocols in order to conduct their antenatal appointments as demonstrated in the following section.

4.2.4 Sub-theme two – "The protocols say" Risk to exercising professional judgement

Due to their contextual situation practicing in large and complex communities, the participants of this study appeared to have their practice 'constricted' as a result of the process driven nature of the antenatal appointment itself and as a result of the antenatal care schedule as seen in Appendix 1 . The antenatal appointments themselves appear to be guided by the computergenerated questionnaires currently employed by the organisation (Appendix 12), which appears to take a 'tick box' form. Whilst this appears to be acceptable for some professionals as can be seen from the following quote, it may also risk 'closing down' conversations in order to meet the needs of the organisation rather than the needs of the woman:-

"…I would like a box to tick just so I can say I've done it you know, and again….. it so, I can actually say and again it gives you licence to give information and ask more questions…" (Kat, 20 years' experience)

When probed more deeply about this approach, some participants recognised that although these mandatory questionnaires appeared to have been designed with the safety of the women in mind they were felt to be prescriptive and not suitable for all situations as demonstrated below:-

"…And sometimes you just think I wish you know, they had the ability to adapt it a little bit. It's just very structured now, and it always was but…Do you remember the old liaison card we used to have? And it just allowed that midwife to have that….and I know I'm very experienced and therefore to keep it safe and for everybody to do the same, that's why the Scottish Handheld Record came along and everybody's doing the same…" (Frances, 25 years' experience).

Despite recognising the importance of maintaining safety and ensuring there was consistency of interviewing, some midwives appeared to comply very strictly to the questionnaires, raising topics only when prompted to so by the questionnaires, suggesting that they may have been uncomfortable in diversifying from the prescribed structure of the questionnaire:-

"…Basically I wait to the point in the notes where I'm almost given licence to talk about it because Trak [computer programme] has told me to talk about it. And the same goes for any other kind of awkward questions like you know the questions about domestic violence, questions about previous drug use or depression or whatever. I ask the question when it actually occurs in the notes…" (Kat, 20 years' experience).

Another midwife approached the antenatal interview in the same way:-

"…I just do go quite by the book when I'm going through the appointment so I would cover that anyway, em, I don't know if I would do anything else with a BMI of 31. I don't know if I would spend a lot of time on that at that appointment…" (Linda, 1 years' experience).

The above quotes suggest that these participants may not have felt knowledgeable or confident enough to engage in detailed discussion about what they perceived to be sensitive issues but were expected to raise them on behalf of the organisation anyway, a BMI≥30kg/m² being one of them. These findings have resonance with other studies (Herring et al. 2010; Schmied et al. 2010; Smith et al. 2012;Biro et al. 2013; Foster and Hirst 2014; Arrish et al. 2016) suggesting that lack of confidence and/or knowledge around the topic of being overweight or obese (and other sensitive topics) may be creating a barrier for professionals when attempting to raise or discuss these issues.

In contrast, other midwives appeared to continue to exercise their autonomy and would develop conversations according to their own knowledge base and understanding with respect to particular topics as can be seen from the following quote from a midwife who has a particular interest in diet and nutrition allowing her to be more woman-centred for certain subject areas:-

"…I probably do focus on it more because I'm quite a healthy person myself and in my family I have siblings in nutrition as a basis of their work. My sister's training to be a nutritionist at the moment so it probably does empower me a wee bit more to feed that information back to women and I think, although it's a tricky topic to talk about, I think it's worthy and it's required.

And even if it's somebody who comes to be at their booking who says they're vegan, I would still want to talk about their diet and make sure they're getting a balanced nutritious diet because of that as opposed to necessarily their weight…" (Heather, 4 years' experience)

The above participant appears to have had access to specialist knowledge pertaining to nutrition suggesting that this knowledge facilitated some conversations. This suggests that when midwives had received targeted education about particular health issues they appeared to be much more confident in their ability to open conversations with women, perhaps demonstrating that targeted education for professionals is a valuable investment within healthcare systems as can be seen in the following quotes:-

"….I had a session with a, when we got the CO monitoring I got quite a good session which taught me loads about smoking and that gave me confidence to speak to women about it so that did help and I was far more proactive about discussing risks of smoking. Cos I always did discuss risks of smoking but I didn't really go into it but now I'm much more specific…" (Mandy, 3 years' experience)

"…Today I went to 2 really good presentations, one was on postnatal contraception because that's going to be a big public health drive on that because that's part of the thing we have to deliver and we've been trying to deliver that for all this time without really any input. Today I was really thinking, my goodness, it only took an hour and half and already I know more than I thought I knew just by reading leaflets, you know. So they took an hour and half out just to talk us through the material and saying 'this is a really good thing' and gave us statistics and showed us slides and answered questions. And then I went to one on the haematology service cos we're

haemoglobinopathy screening, and again you know, she just took the time and actually I came away thinking I know loads more about that than I thought I needed to…" (Kat, 20 years' experience)

These findings suggest that midwives who have received targeted education will take ownership of their practice and go on to open relevant discussions with women about these topics. However, whilst some midwives may take ownership of their professional accountability for their practice, and construct their appointments in accordance with the woman's needs, the following quote suggests that some practitioners rarely deviated from the questionnaires due to the concern of having their practice criticised:-

"…If I've got somebody who's not right mentally then I've not anything…... I've not done their breastfeeding, their feeding or their contraception or any of the other chats that I'm supposed to have and then you have a bit of a panic thinking 'oh my god if these notes are audited then it's going to highlight that I've not'…" (Mandy, 3 years 'experience)

Participants described how as the appointment progressed and the provision of obstetric medical advice became more central to discussions, particularly with respect to increased risks, they appeared to adopt the 'language of obstetric medicine' and utilise language that is more commonly associated with a traditional paternalistic medical model of care:-

"…but I do always use the BMI as a tool of saying 'your BMI is 35, we have been given ***clinical guidance*** *from the hospital that we are screening everybody with a BMI of over 30 for* ***gestational diabetes'****. 'What's that (name)?' So then I explain, I say that……so that then kind of starts them thinking about 'gosh I didn't realise'. So we will be screening you but it is important that you try and keep……..I say it 2 or 3 times…"* (Elaine 14 years' experience).

Other midwives however, appeared to recognise this tension between medical and midwifery approaches and were insightful about the language that they used. They appeared to raise the topic in a more 'gentle' way, using more informal language and this appeared to strengthen the messages of safety that closer monitoring facilitated as can be seen in the next quote:-

"…so I'll complete the medical history and that's when I'll maybe bring into play that you know there are reasons that we may need to take extra precautions or keep a wee closer eye on baby via scans and things like that and that's when I would probably bring in the fact that BMI is a factor eh…. And there would be extra precautions that we would ***offer****. And I always do say* ***'offer'*** *because like any other condition it's em it's certainly down to the* ***women whether or not she decides to accept these things****…"* (Denise, 1 years' experience).

The above quote however, also demonstrates that the midwives appeared to acknowledge and understand that they had an obligation to treat all women as individuals. Despite acknowledging that there may be some benefits to the organisation surrounding the use of the prescriptive questionnaires, there was a suggestion that when required to, midwives did focus upon the needs of the individual women, placing them at the 'centre' of the appointment and focusing

upon what the woman herself was saying. This appeared to facilitate a more woman-centred way of working and appeared to assist in developing discussions that were pertinent to the individual woman's needs:-

"…I just feel if somebody's sitting in with me and they're telling me something that they've never been able to tell me before I can't just say 'well can you come back next week and we'll fit it in'? …" (Linda, 1 years' experience)

Another participant echoed this approach and appeared to focus upon the needs of the individual women too:-

"…So you're discussing women's fears around childbirth and preparations for birth but she'll also want to bring in a conversation about how her partner isn't engaging in the pregnancy or something like that so you go down another 10 minute conversation about that…" (Heather, 4 years' experience).

Not only does the above quote demonstrate that there may be issues that are pertinent to individual women, it also suggests that midwives perhaps need to be utilise their tacit interpersonal skills when discerning what is of the utmost priority to the woman and focus upon that, rather than following the prescriptive electronic questionnaires.

This woman-centred approach was not unique; another midwife couched her discussion in positive language too. She appeared to perceive her approach as being respectful and nonpaternalistic that conveyed the importance of carrying out further screening, particularly when pregnant women presented with a raised BMI≥30kg/m², allowing the woman to decide for herself if accepting additional screening was the right thing for her.

"…But then I actually do say so I say 'this is considered to be obese and we're into the obese category. It's important because it puts you more at risk of things like diabetes and high blood pressure so what I'd like to do is give you some information about how to look after your weight when you're pregnant'. Most people are receptive to that, from a very affluent part of [city's name], people are receptive to receiving the information…" (Kat, 20 years' experience)

This contrasts between the former quote; the latter one suggests that while some midwives believe that they must defer to medical protocols and procedures, others appear to be more comfortable discussing the medical protocols with the women and allowing the woman to decide for themselves whether they would like to accept additional monitoring/investigations or not. By practicing in the latter way and involving women in their own care, midwives appear to be preserving their professional autonomy. Other midwives however appeared to find this more challenging and it appears that they felt it mandatory to carry out additional procedures with or without the woman's consent:-

"…It's actually fairly easy for a midwife, a community midwife to discuss diet because the diabetes protocol has changed and I ***have*** *to do things like an HbA1C and a fasting blood glucose at booking or just immediately afterwards…"* (Julia, 5 years' experience)

The above quotes suggests that while some midwives may be insightful and have awareness about the language they use, suggesting that they feel that the relationship that they are attempting to build with the woman is valued and preserved, others feel that they are obliged to follow protocols without the woman's consent. As discussed in an chapter 3, the use of certain

language is an important concept in social constructionism theory (Gergen 2015) as particular phrases or expressions may be understood or interpreted differently in different contexts. By involving the woman herself in discussions about her own care and facilitating her to make informed decisions for herself regarding particular procedures and/or investigations suggests that some midwives retain the core professional value of advocate (Stevens 2011). However, the latter quote suggests that some midwives perhaps adopt a more paternalistic approach by not discussing these additional investigations with women.

These findings suggest that despite there being a potential risk to autonomous practice in the context of community midwifery care, some professionals may be more proactive than others in constructing an antenatal appointment that is truly woman focused whilst at the same time meeting the expectations of the employing organisation and the national clinical guidelines. Practicing in this woman-focused way perhaps demonstrates that some practitioners are confident in deviating away from the apparently prescriptive nature of the appointment structure in order to meet the needs of the woman and her family as the pregnancy progresses.

4.3 Theme 2 – Constructing partnerships with women

4.3.1 Sub-theme 1 – Developing an effective relationship with women

Whilst the midwives understood that they were central in risk assessing the woman's health and in discussing appropriate information with her pertaining to her pregnancy, building a relationship with women and their families appeared to be a key and important aspect of the antenatal appointment, especially during the 'booking' appointment as can be seen from the following quotes:-

"…obviously you want to build up a good kind of mutual trusting relationship…" (Catriona, 4½ years' experience).

Other participants expanded on the value of this relationship and alluded to the fact that they were keen to develop and maintain it as the pregnancy progressed, they appeared to believe that by developing a trusting relationship their role as advocate for the women that they provided care for was affirmed:-

"…Em, one where they can trust you, they're happy to tell you anything and they can ask you anything that's worrying them. Yeah, you know, just that you're there to support them and you can get them through their pregnancy safely…" (Mandy, 3 years' experience).

"…I want to be someone who that woman can turn to if they've got a problem, can feel comfortable with, that I feel that I can communic…chat with her quite openly about things that are affecting her health or her pregnancy, eh, and just be, I suppose just being a fan of that particular lady and make her feel that she's an individual being cared for as best I can…" (Linda, 1 years' experience).

Despite this desire to build a relationship with the women, the midwives clearly understood that they had a central part to play in providing advice in order to promote and maintain safety for both mother and baby during pregnancy as demonstrated in the above quote. This quote also suggests that the midwives embrace their role and are clear as to what their professional duties are with respect to providing the best and most appropriate care (Pathways for Maternity care 2009). The participants of this study in keeping with international counterparts (Heslehurst et al.

2013; Forster & Hirst 2014; Knight-Agarwal et al. 2014) were also aware however, that some of the information they were expected to provide had the potential to cause offence to the women and they were keen to avoid this eventuality. The understanding of what was expected of them by the organisation and raising potentially offensive issues appeared to cause tension for some of the participants as can be seen in the following quotes:-

"…at that initial meeting you are trying to build up that relationship and the last thing you want to do is annoy…" (Catriona, 4½ years' experience).

"…I don't want to cause harm or cause them to be upset because they're anxious and it's their first appointment and they're excited…" (Elaine, 14 years' experience).

The desire to avoid offending or upsetting women was a common theme that emerged from the data and suggests that some midwives attempt to protect the women by potentially omitting topics from antenatal conversations that they themselves perceive to be uncomfortable or sensitive. By practicing in this way, there is a risk that professionals may omit key health topics during appointments; this could potentially be detrimental to that particular woman and her baby. Midwives too appear to be aware of the risk of having complaints raised against them if such topics are raised as can be seen in the next quote when a midwife relayed the experience of one of her colleagues:-

"…I think she actually just made some comment about there being a lot of mummy or something when she couldn't palpate or do an FH [fetal heart rate], it was something like that and she made a comment, not an unkind comment but just sort of made a bit of comment em and the woman took huge offence at that and deselected[6] *her so it makes you a bit wary about you know, saying to women…"* (Mandy 3 years' experience)

Continuity of care and carer appeared to be valued by participants as a way of overcoming the difficulty of raising some of the uncomfortable topics with women and this was a part of the community midwifery service that the midwives appeared to value highly. They appeared to believe that having developed a trusting relationship with women, they would be better able to raise uncomfortable topics throughout the pregnancy as can be seen in the next two quotes:-

"…*Yeah, definitely because it is all about relationship building isn't it. I mean that's part of our role is building that relationship with the women and if you've got a good relationship with your women they will be receptive to what it is that you're saying to them. They will take on board the advice you've given them so definitely. Definitely…"* (Issy, 6 years' experience).

"…*So it is it's much easier once you've seen someone a couple of times, they feel more comfortable and they can tell you things, you can have a much more frank conversation…"* (Catriona, 4½ years' experience).

[6] The decision a woman might make if she is unhappy with care from a particular midwife and refuses to see that midwife again.

However, despite this belief, not all of the midwives appeared to return to the topic of weight management or diet and nutrition advice as the pregnancy continued:-

"…Yes, you follow the booking appointment, you follow that. Yep. You weigh them and you put the weight down but I never discuss weight and I've never been told that weight is something we should discuss…" (Mandy, 3 years' experience).

These findings suggest that despite acknowledging that building and nurturing a relationship with pregnant women and striving to maintain continuity of care and carer, some midwives may still be reticent in discussing some perceived sensitive topics. The above quote also suggests that midwives, who are professional people, appear to be waiting for 'permission' in order to discuss the risk of being overweight or obese in pregnancy.

4.3.2 Sub-theme two – Information exchange between midwife and woman

Despite the midwives recognising that developing a relationship with the women in their care could be positive, none of those who participated appeared to have ever received education or training with respect to utilising formal consultation models. They did however construct communication strategies that they appeared to believe would allow them to open conversations about topics they perceived to be sensitive or uncomfortable. However, for some there was a sense that this was a challenging area of practice:-

"…I really, really try and eh, and again I don't even know if this is the right way to do it, it's almost kind of depersonalising it. I go 'it is considered that if you have a BMI over 25, that's

considered as being overweight and if you're considered over 30, that is tipping into the obese category and I usually make a face and it's almost like they consider this and not that I'm challenging you personally and directly…" (Kat, 20 years' experience)

Despite this apparent challenge to practice, the importance of communication both verbal and non-verbal as key professional skills appeared to be recognised by the participants as demonstrated in the following quotes:-

"…Communication, communication skills. Definitely, definitely cos it's so crucial. If you think of all the adverse events and complaints that come into the NHS don't they say that 99% of them is just poor communication?..." (Frances, 25 years' experience)

In the following quote the midwife recognised that her informal approach to conversation may have been potentially stressful for the woman when her demeanour changed, suggesting that women are very aware of body language as well as speech content as also demonstrated in the quote above:-

"…Doing it professionally is different, that's a different challenge altogether is trying to maintain professionalism when you're quite chatty. You have to tone it down. Yeah, yeah. It's terrible, it's terrible. And for me I think the crux of it came when one of my patients burst in to tears when I was palpating her [abdomen] because she thought there was something wrong and I said 'there's nothing wrong'. And she said '(name) your face completely changed, totally

changed. You went from being smiley and happy to almost severe'. I said 'I was just concentrating'…" (Julia, 5 years' experience).

The above quotes demonstrate that midwives understand how important communication is with respect to providing antenatal care, however, when asked about how they had learnt their communication skills they were less clear. When one participant was asked about any education that she had received with respect to communication or consultation skills, one midwife was unsure what consultation meant:-

"…Em, well. Yes. What do you mean by consultation?..." (Linda, 1 years' experience)

This same midwife felt however, that she had been in an optimal situation to learn communication skills as a student by observing her registered colleagues:-

"…I think as a student you've got such a fantastic position, you're in such a fantastic position because you get to work with different midwives and see how they do things and I was forever 'Oh I like the way she said that', 'Oh I like the way she did that', you know. So you pick up a lot of positive ways of saying things through watching other people and then I think when you qualify you just have to learn what, what your style is but it takes time to do that you know…" (Linda, 1 years' experience)

All of the midwives commented that they had learnt 'on the job' with respect to communication and consultation skills by observing the practices of their mentors. They also believed that their experience in the job had equipped them well to communicate appropriately:-

"…I just think that's just years and I think realising what works and what doesn't and also the feedback from my women because I have been here for 13 years, a lot of them say that they like the 'spade like' approach that I have…" (Elaine, 14 years' experience)

The above quote suggests that practitioners have developed their skills informally through 'trial and error' and by observing colleagues rather than exploring evidence based theories of consultation or communication that could perhaps underpin their practice.

With respect to discussing body weight and BMI, professionals appeared to find it easier to communicate about the subject with women when the women themselves raised the issue of their own volition. However, for some professionals this did not always trigger a discussion about the relevant issues and some midwives avoided it altogether rather than trying to explore the issue with the woman as can be seen from the following quote:-

"…I've got one girl on my caseload just now who's BMI is 42, again it's her second pregnancy with me so I know her really well and you know every time she comes she's like 'I just feel like a big fat frump' and I'm like 'Oh no you're fine, you're fine blah, blah, blah', I just feel like a hypocrite actually…" (Midwife 7)

This quote suggests that the midwife is avoiding the topic of weight in keeping with the theory that she may be of the belief that she is protecting the woman from offence (Willcox et al 2012; Heslehurst et al. 2013; Forster & Hirst 2014; Knight-Agarwal et al. 2014). Others however appeared to engage in meaningful dialogue with the women in order to support them throughout the pregnancy as demonstrated below:-

"…So I say 'the computer's just worked out your BMI, were you aware of your BMI, do you know what BMI is?' and just you know, explore it with them. And they just go 'well I know I'm a wee bit heavier' or sometimes if it's a second time Mum they'll go 'well I'm definitely a wee bit heavier than I was in my first pregnancy'…" (Frances, 25 years' experience)

However, although this midwife appeared to not shy away from the topic, she still used an avoidance tactic, it appears, by blaming the electronic calculation and used that as a mechanism to raise the topic.

The above quotes may suggest that some individual midwives have developed strategies and learnt how to communicate with women in an observational way without having considered the underpinning theories of consultation that are available (Silverman et al. 2013), especially when discussing perceived sensitive topics. These quotes also suggest that there is an assumption that midwives would develop their communication skills as they gained clinical experience. This approach to communication however, may not be efficient in light of the varied topics that midwives are now expected to discuss with women (Bharj & Daniels 2017) and this in turn may be detrimental to women, particularly if some topics are discussed in what is considered to be a sub-optimal way by women.

4.3.3 Sub-theme three – Not knowing [enough about the topic]

When asked, all of the midwives recognised that to have a raised BMI≥30kg/m² posed potential risks to women and their unborn babies. They appeared to feel confident about discussing diet and nutrition albeit to a basic level using the printed resources that are available to them (Ready Steady Baby 2019). Conversely, they appeared to lack confidence when discussing the *risks* of being overweight or obese with women and appeared to falter when providing advice on how to optimise their health in order to moderate these risks. This lack of confidence appeared to stem from individual's perceived lack of knowledge about the subject of weight gain and weight management in pregnancy as can be seen from the following quote:-

"…I'm not that knowledgeable so I don't know. Is someone whose BMI is 25, would their weight gain, is it a different kind of weight gain to someone who's BMI is 45. Do you know, I don't know if there's any differentiation or whether the expected weight gain for both of those BMIs is the same…" (Issy, 6 years' experience).

Other midwives however, appeared to be confident in advising women about expected weight gain but the advice varied from midwife to midwife with some advising that to maintain weight within 2 stones (28lbs) and others giving no specific target:-

"…So we will be screening you but it is important that you try and keep……..I say it 2 or 3 times. You have to try and keep within your stone – 2 stone, within 2 stone, under 2 stone, eat healthily, and then I talk about diabetic screening…" (Elaine 14 years' experience).

Another midwife advised women that everyone was different and that there was not a number to be placed on weight gain during pregnancy:-

"…Well I mean I don't put figures on it. I don't really like putting figures on it cos everyone's an individual. Em, so I would say 'you don't eat for two, you eat your normal healthy diet and there will be times in your pregnancy when your weight may be static and other times where your weight might increase markedly and that's a normal pattern for you'. But I don't really like pounds and ounces for women..," (Julia, 5 years' experience).

The above quote suggests that some participants had insufficient knowledge about the topic of weight management, diet and nutrition this in turn appeared to inhibit discussion about this topic. The above quotes may also highlight another concern with midwifery practice; that of identifying, retrieving, critiquing and applying the currently available evidence that exists pertaining to these health issues. Current guidance for example, on weight gain target during pregnancy suggests that women should not be advised about weight gain during pregnancy because there is currently insufficient evidence to support any advice (RCOG 2018). One midwife, when talking about (non-peer reviewed) websites commented that it was difficult to discern what was advisable to relay to women or not as can be seen from the following quote:-

"…And again it's like weight gain in pregnancy, you know they'll go in to one website which says that one, they'll go into another website which says that one so it leaves them feeling really confused. They come to us and we say something different again and it's a bit like 'God, who do you believe?'…" (Issy, 6 years' experience)

The above quotes demonstrate that in the current context of midwifery care, women may not be receiving consistent or evidence based advice from their primary healthcare professional. This raises concerns that some midwives may not be sourcing or scrutinising evidence from peer reviewed sources:-

For some midwives however, their knowledge with respect to weight management in pregnancy appeared to have been sourced from general media rather than from their own professional activity as can be seen from the next quote and this is of concern:-

"…I heard a radio programme that said people who are overweight think they're normal and people who are obese think they're overweight…" (Kat, 20 years' experience)

Several midwives acknowledged that they had gained knowledge from this informal approach to sourcing information, however for some they did recognise that they had a professional responsibility to update their personal knowledge as can be seen from the following quote:-

"…*Em and it just you know, a bit of extra reading around it. There was also ……I've been to the Mama*[7] *conference a couple of years ago and there was a really good study section about giving care to women who have a raised BMI…"* (Denise, 1 years' experience)

[7] Midwives and Mothers Alliance – a lay organisation that brings mothers and midwives together at an annual conference within the UK.

The findings here suggest that whilst midwives value the midwife/woman relationship, they still, at times struggle to raise the topic of weight and weight management. This may be due to the experiential learning cited earlier with respect to their learning communication and consultation skills but it may also be due to a lack of knowledge around the specific subject area. Whilst professionals acknowledged they had limited knowledge with respect to certain subjects, there appeared to be little evidence within the data that suggested they turned to peer reviewed evidence to strengthen their knowledge. The evidence here however, also suggests that some midwives appear to be embrace their professional responsibilities and work hard to promote safe practice and in so doing protect women from complications.

4.4 Theme three - Midwives as Public Health Agents

4.4.1 Sub-theme one – Mode of delivery (of public health messages)

Delivering public health messages is now considered central in supporting maternal and infant health (McNeill et al. 2012; Sanders et al. 2016). The findings from this study identified that midwives in South East Scotland (as with other geographical areas in the UK) appear to have been opportunistically identified as being the optimal professionals to deliver such messages (Sanders et al. 2016).

Whilst there appeared to be general agreement amongst the participants that they were indeed in an optimal position to deliver this information as can be seen from the following quote:-

"…Em, I think midwives are a key part in public health because we have such a long period of time with women, especially as a CMW you have got that you know, 10 or 12 appointment times in the antenatal aspect, and then you're getting to be in the home with the woman for several

visits afterwards so I think the amount of time in the relationship that you can build up with a family in that time is key to being able to input public health initiatives…" (Heather, 4 years' experience)

This positive view was not echoed by many of the participants; there appeared to be concern about the volume of information they were expected to give to women and their families and concern about the mode of delivery of public health information which currently is mainly achieved by providing leaflets regarding specific topics:-

"…because, I'm sure that you're aware that in our 20 minutes we're tied up in absolute knots of giving lots and lots of information…" (Elaine, 14 years' experience)

This midwife went on to say that:-

"…It is process driven [the antenatal appointment] and we have to give them a phenomenal amount of information at every single appointment…" (Elaine, 14 years' experience)

Not only does this quote demonstrate that there is a large volume of information given to women, it also links to the earlier section that suggests that practicing in a woman-centred way may be at risk because midwives are expected to give *all* women the same information.

Some of the participants also had a suspicion that the women did not process any of the information that was given to them, calling in to question the effectiveness of this mode of delivery of information:-

"…Em, but I feel that there are so many [leaflets] given out to women during the course of their pregnancy that unless they are going home and reading that leaflet that day they will have stacks of these in notes, in the back of their blue notes, in their folder or under their coffee table that they don't know which one is the most important to look at any more. And they don't take it all in, they don't retain it all I don't think…" (Heather, 4 years' experience)

This concern about whether the women engaged with the provided literature or not was echoed by another participant as can be seen in the following quote:-

"…I don't think the women read them. Quite often, you know, you put stuff in the back of their notes [handheld casenotes] and it's all sitting there and they've not looked at it and that goes for all of them…" (Gaynor, 17 years' experience)

During the course of data collection, the participants were invited to give their views about the value of providing leaflets with more detailed information about diet, nutrition and weight management to women who had a BMI≥30kg/m². This suggestion was negatively received, suggesting that this mode of delivering information opportunistically may not be an effective mode of delivering public health information as demonstrated below:-

"…I don't think you'll get any midwife who'll be happy to give out more leaflets…" Heather, 4 years' experience)

This opinion was a common theme that emerged from the data and some participants acknowledged that they may have benefitted from having some printed resources for themselves as can be seen from the following quote:-

"…Printed resources, I think would benefit midwives [but not necessarily women]…" (Issy, 6 years' experience)

When asked about how delivering public health messages in leaflet form impacted upon their role, the participants felt that they had been exploited to some degree. There was a sense that they had been placed under pressure to ***'squeeze'*** more in to their appointments in order to accommodate the public health agenda and the organisation but there was a feeling that this decision had been made opportunistically and without prior discussion or planning with the midwives themselves as demonstrated in the following quote:-

"…So over my years, honestly (name) I think, I think we're being exploited a wee bit. I think we're being used and abused. I do feel that…" (Frances, 25 years' experience)

This midwife went on to say:-

"…I do think, it's not that I'm not valuing that but I think sometimes, sometimes I feel as a midwife what my role is as a midwife, sometimes it's diluted by all the public health stuff I have to do…" (Frances, 25 years' experience)

Another midwife had a similar viewpoint and was concerned that the role of the midwife was expanding to accommodate other roles:-

"…you know, as well as being midwives we're like public health, we're like social workers, we're a lot of the time dealing with women with mental health problems who aren't eligible for the perinatal mental health team so you know our role is huge and quite varied so it's not just about being a midwife anymore. Definitely not…" (Issy, 6 years' experience).

Despite feeling this way, there was clear recognition that delivering public health messages may have a positive effect upon women and their babies and some participants appeared keen to engage in the public health agenda and to support maternal and infant health as demonstrated below:-

",,,It's a really big issue facing the NHS as a whole but I think it's a special priority where you're talking about maternity services cos it's not just one person you know. You've got a chance to lower risks if you like. I think it is something that we need to get more streamlined and make sure that everyone's got the same knowledge to draw on…" (Denise, 1 years' experience).

This quote suggests that rather than the midwife's role becoming subsumed into another more public health based one, it may be diversifying and expanding to meet the changing societal and health needs of the population. In other words, the community midwife's role may be under '*reconstruction'* as different traditions and practices develop within the practice remit (Gergen 2015).

4.4.2 Sub-theme two – "I think they want us to give all of it priority" - Prioritising messages

The volume of information that the midwives issued to the women appeared to cause tension for professionals and there was a suggestion that the amount of information they were expected to give to women was overwhelming as demonstrated in the quote below:-

"…Yes. I mean, in your booking appointment you haven't got huge amounts of time so you talk about honestly, you talk about so many different things. I mean, my wee girl the other day she said 'Oh I feel quite faint, there's so much information' (laughs). I said 'I know, I'm so sorry I'm giving you so much information', and she was totally straight forward…" (Mandy, 3 years' experience)

Another midwife described the amount of information that was issued to the women as being 'reams' :-

"…then we have all the reams and reams of information that we give women so all the leaflets are there. So flu, whooping cough, HV services, Dads 2 B, all these things are all in there ready for me…" (Denise, 1 years' experience)

This finding appears to suggest that when women present for care and who have complex medical or social histories that tensions may again exist for midwives as they strive to develop a woman-focused appointment but at the same time issuing prescribed information to the women that the organisation expects. This suggests that various topics may compete for time during appointments and therefore some issues may not be as fully discussed as others might be as can be seen by the following quote:-

"…Trying to fit in really important conversations about nutrition…..about so many things. Em and it's just really about trying to make sure you do them all justice…" (Denise, 1 years' experience)

Tension also appeared to exist for professionals as they tried to discern what topics required to be given priority over others for individual women as they negotiated their way through the various antenatal appointments ensuring that all the necessary information was discussed appropriately as can be seen from the quotes below:-

"…I think they want us to give everything priority, I think their [managers and leaders] expectations are quite unrealistic and everything that we have to go through if you think of an actually booker nowadays, the amount of leaflets we're expected to give out and discuss and not just even in booking appointments, these are return appointments as well so really we should revisit somebody's health and diet and exercise like you should with anything else but again in 20 minutes you just don't have always the time…." (Heather, 4 years' experience)

"…Emm but certainly in a 20 minute appointment we've got a list of things that we need to cover…" (Catriona, 4½ years' experience)

These quotes appears to link with an earlier one (page105), demonstrating that although the midwives agreed that they were ideally positioned to deliver public health messages, they appear to believe that the decision makers who identified them as *'public health messengers'* had done so with little insight in to their already demanding roles. The perceived expectation by professionals to prioritise 'everything', suggests that this may put a woman-focused appointment at risk because *all* women appear to receive *all* of the public health messages regardless of their needs or wishes causing tension for midwives.

4.4.3 Sub-theme three – "[Feeling] so time constrained". – Time constraints

Several participants identified time constraints during antenatal appointments as a major barrier for professionals in providing woman-centred care. Although ninety minutes is allocated for the initial booking appointment, this was still considered inadequate by professionals. Not only did they find it constrictive but they were aware that for some women this was a long time and may have caused tension for *them* as can be seen from the following quote:-

"…So time pressured I have to say and I'm not making excuses but you know (name) the amount of information that we are expected to give these women is overwhelming. It's overwhelming. It's overwhelming for me as an experienced midwife so god knows what it is for these women… ". (Frances, 25 years' experience)

Whilst the booking appointment is the longest one that women will attend, all the subsequent appointments last between fifteen and twenty minutes depending upon the individual community teams. However, for some midwives this still appeared to be an insufficient amount of time in which to carry out all the necessary tasks that an antenatal appointment necessitates and with the woman's individual interests at heart as can be seen from the following quote:-

"…In a 28 week appointment you've got to find out how she's doing, do a BP, do a urinalysis, you've got to take bloods, if she's Rhesus negative you've got an Anti D [injection]) to give then you've got to do an abdominal palpation, auscultation and you've got 20 minutes to do all that. And you know, if she's at that point in her pregnancy where her mental health's suffering you haven't got time to ask anything else about diet or anything like that. So I suppose it's about trying to gauge how that appointment is going to go and sometimes 20 minutes is just not enough…" (Issy, 6 years' experience)

Tension also existed for professionals during antenatal clinics when they were conscious that some women might be kept waiting and for some they identified this as being disrespectful to the women:-

"…Time management, it's just the actual physicality of not having enough time and I'm really conscious. I hate my clinics running late because I'm a patient at my GP's surgery and I hate sitting waiting to see someone and so I know how it feels but I also think it's really disrespectful…" (Julia, 5 years' experience)

This midwife went on to comment that a possible solution to the difficulty of not having adequate time with the women was to provide additional appointments:-

"…Give me an extra 3 times to see a woman in pregnancy and I might be able to fit in everything to the extent that I would want to do it which is 40 minutes for example, 30 minutes appointments where I can cover everything and I can listen to the woman as opposed to thinking I've got another woman in the waiting room. I've got 2 women waiting for me…." (Julia, 5 years' experience)

This concept of increasing the amount of antenatal appoints in order to concentrate on the individual needs of the women and to ensure that there was comprehensive coverage of all of the key topics that professionals felt they needed to discuss and that may be beneficial for some women was echoed by another midwife:-

"…I sometimes think it might be better if we could do it [booking appointment] over 2 separate appointments where I suppose we could get all the clinical stuff out the way in one and then have a chat about all the other issues in the other because there is a lot to talk about and for them to take in. .." (Denise, 1 years' experience)

Not only does this quote demonstrate that midwives feel that they are time constrained during appointments, it also suggests that some midwives may feel constricted by the current antenatal care schedule (NICE 2019) and feel unable to negotiate with women in order to devise a

personal schedule for some women. However, as professional people, midwives are in a position to alter this schedule, ensuring that women receive the care they may need or desire.

4.5 Conclusion

The findings from this exploratory study suggest that midwives who practice in this area of South East Scotland practice within a complex contextual situation blending the two paradigms of obstetric medicine and midwifery practice that promotes a philosophy of pregnancy as a normal physiological event. Good use is made of clinical protocols in guiding clinical practice to ensure that recommended clinical investigations are carried out and that women receive appropriate individualised care, these protocols however may also be giving practitioners 'permission' to raise perceived sensitive issues of which living with a raised BMI≥30kg/m² is one.

The findings from this study suggest that some midwives perceive themselves to be effective professional communicators, however, none of the participants in this study had received formal education with respect to communication or consultation practice and have 'learnt on the job'.

Tension appeared to exist for midwives as they strived to provide woman specific care whilst at the same time being expected by the organisation to provide all of the women in their care with the same information particularly with respect to public health messages regardless of individual needs. Some practitioners appeared to have difficulty in reconciling the prescriptive nature of the antenatal appointment with the individual needs of the women. A strong finding from this study was that midwives placed importance upon building partnerships with women. The participants all felt that this was a key area and when a good partnership developed, it facilitated effective and honest communication including discussion about perceived sensitive issues.

The following chapter discusses in more detail the three main themes that emerged from this study that may be impacting on clinical midwifery practice:- the contextual situation of midwives, communication skills development and how midwives appear to function as public health messengers.

5 Discussion of Findings

5.1 Introduction

This research study was concerned with exploring the professional practice of midwives in one specific geographical area in South East Scotland. Its aim was to explore what it meant for midwives when raising issues with women pertaining to living with a raised BMI≥30kg/m² and how they subsequently discussed the risks and lifestyle issues that surround this. This chapter discusses key areas that have emerged from the data that pertain to the area of practice that was explored:- the contextual situation in which midwives practice and the apparently rigid antenatal framework in which they operate, how they construct their communication strategies in order to raise any perceived sensitive issues and finally, how they appear to function and be utilised as public health agents by the employing organisation.

5.2 Contextual Situation of Community Midwives

5.2.1 Blending Two Paradigms – the Use of Clinical Protocols and Guidelines

Midwives occupy a unique situation in healthcare. They are group of professionals who provide clinical care to a population of young and (mainly healthy) women who are not ill. Midwifery practice is underpinned by a philosophy of ‘normality’ that puts forward the belief that pregnancy, labour and birth are normal physiological events to which the woman’s body is readily able to adapt and that requires no or little medical intervention (Scammell & Alaszewski 2012; Midwifery 2020 2010). However, the population of pregnant woman has changed over the last twenty years or so with women now often presenting to maternity services with pre-existing co-morbidities, who are older (more than 30 years) and often present with a BMI≥30kg/m²

(McCall et al. 2016). These additional health and demographic factors appear to be putting women at increased risk of complications arising during pregnancy, labour and birth (1.1). This suggests that the midwife, in the context of providing antenatal care may have to consider redirecting the focus of his/her practice from one of promoting normality to one of 'risk assessment' and 'risk management' and provide enhanced monitoring for some women. Recognising and responding appropriately to these diverse needs appears to be causing tension for some midwives, therefore this group of professionals need to develop robust critical thinking and decision making skills. Whilst midwives may wish to instill confidence in the women to whom they deliver care by promoting 'normality' in pregnancy and advocating for normal birth, they are now expected consider additional risk factors pertaining to individual woman and act upon these findings by initiating additional monitoring (NICE 2008, Updated 2019). Identifying a woman who is living with a raised BMI≥30kg/m² is one such example and currently necessitates midwives to direct women down, what perhaps could be defined as, a 'medicalised pathway' of monitoring with an understanding that this will ensure the safety of both mother and baby (Teijlingen 2005; Scammell & Alaszewski 2012).

Currently midwifery and obstetric clinical practice is supported in the UK by 'driver' documents such as the evidence based MBRACCE (2014; 2018) reports and the consequential guidelines that are developed by bodies such as the Royal College of Obstetricians and Gynaecologists (RCOG) and National Institute for Health and Care Excellence (NICE). These documents exist to provide frameworks for safe practice when delivering care to women and their babies with the ultimate aim being to end the pregnancy with a healthy mother and baby. Clinical governance also underpins this approach to maternity care and multi-disciplinary working that exists within the UK NHS (Safer Maternity Care 2016).

When initially critiquing maternity care, it appears that there may be a dichotomy between the midwifery and medical obstetric paradigms. Women who are identified as having 'low risk' pregnancies attend their local community midwives for monitoring and those who are identified as having 'high risk' pregnancies traditionally attend (obstetric) consultant led clinics that are (usually) held in the hospital setting (Midwifery 2020 2010; The Best Start 2017). However, women identified has having 'high risk' pregnancies are currently provided with care that is shared between the obstetrician and the midwife (Midwifery 2020 2010; The Best Start 2017). This suggests that the participants do not practice in one paradigm or the other but transfer their practice across both of them depending upon the individual needs of particular women and in so doing blend these two paradigms into one model of care that promotes safety and ameliorates any potential complications that may arise as the pregnancy develops (4.3.1). This observation suggests that midwives may have constructed or *re-constructed* their practice in order that they provide support to *all* the pregnant women to whom they provide care to during pregnancy. In addition, the findings from this study suggest that developing trusting relationships with women (4.3.1) is instrumental for them in facilitating putting forward their clinical knowledge to the women in a positive and not judgmental manner.

The evidence from this study suggests that local clinical protocols are useful for midwives when facilitating the initiation of difficult conversations pertaining to sensitive issues during the antenatal appointments (4.3.1); living with a raised BMI being one such example. However, there may be a risk that the apparently prescriptive nature of these clinical protocols (RCOG 2018) and the clinical recommendations that are given within them, direct the midwife to inadvertently impose additional investigations upon women rather than engaging in detailed discussion with them and gaining their informed consent as can be seen in (4.3.1) when midwives explained that they ***'had'*** to [carry out additional tests] . Placing the woman's wishes at the centre of her own care is a principle tenet of the new model of midwifery care that is currently being developed (The Best Start 2017). Midwives therefore, will need to recognise that

the *informed* decision to accept or decline additional investigations during pregnancy lies with the woman and not the organisation that provides care and remember that informed consent is a central tenet of healthcare (Chan et al. 2017). This approach, involving the woman in her own care decisions (Midwifery 2020 2010; The Best Start 2017), but maintaining awareness of particular concerns, may reduce the risk of conflating her pregnancy to a list of risk factors and complications that may, in turn, leave woman-focused care behind. For some midwives however, having such open discussions and offering women choices may be causing tension due to a belief that the recommendations advocated within the clinical protocols (particularly with respect to obesity) must always be adhered to despite the woman's wishes (4.3.1). This suggests that some of the midwives who participated in this research may lack proficiency in their critical thinking, decision-making and consultation ability when discerning what topics are the most pertinent to discuss for some women.

These findings suggest that some midwives may be challenged within their professional role to adequately inform obese women about the potential health risks that both they and their unborn baby may face, and find it more acceptable to continue promoting normality, which in turn may contribute to poor pregnancy outcomes for both mother and baby. This way of practicing could be interpreted as an example of 'system 1 working' (Crockskerry et al. 2013a) where routines are followed and the same decisions are made as have been previously as a result of having seen similar situations on many previous occasions. Being time constrained and having a heavy workload appears to predispose individuals to work in 'system 1' (Crockskerry et al. 2013a) and this perhaps makes midwives more vulnerable to working predominantly in 'system 1'. Crockskerry et al. (2013b) go on to suggest that 'debiasing' is essential for developing clinical judgement and reasoning skills. Debiasing is a term used by Crockskerry et al. (2013b) to explain the errors we make as a result of the systems that we routinely work in they also state that "bias is inherent in human judgement" (Crockskerry et al. 2013a, p, ii58). Midwives

therefore, in the course of their professional work, may need to be aware of their own professional biases if they are to consider the needs of individual women and ensure that issues pertaining to their particular needs are prioritised during antenatal appointments by adopting a more analytical approach. This transition to becoming more analytical is what Crockskerry et al. (2013b) refer to as 'system 2' working where thought processes are 'debiased' from the usual patterns and a different but more appropriate decision may be made for the situation that is currently presenting itself. Adopting this approach to antenatal appointments may afford midwives some professional distance but still underpin the midwife/woman relationship that appears to be central to practice (2.1)

Frain (2018) has suggested that professionalism encompasses clinicianship, workmanship and citizenship and that a professional person respects the patient's autonomy and has the ability and knowledge to make sound decisions and is a law-abiding citizen. The NMC (2018) has further refined the definition of professionalism as:

> *"…Professionalism is characterised by the autonomous evidence based decision making by members of an occupation who share the same values and education. Professionalism in nursing and midwifery is realised through purposeful relationships and underpinned by environments that facilitate professional practice. Professional nurses and midwives demonstrate and embrace accountability for their actions. "* (NMC, pp. 3).

Therefore, as healthcare professionals, midwives have a Duty of Care to provide honest and evidence-based information to women even when that information may feel uncomfortable for the professional. The risks of obesity as discussed in chapter 1 (1.1) can have far reaching implications for the health of mother and baby suggesting that engaging in open discussions

about the risks of obesity is a conversation that should take place. This not only meets professional standards (NMC 2019) but also meets the standards laid down in the professional Code of Practice (NMC 2018) which stipulates that registrants should prioritise people, practice effectively, preserve safety and promote professionalism and trust. It also aligns with the NMC's (2019) standards for midwifery practice that stipulates midwives should "focus on the needs, views, preferences and decisions of the woman" (NMC 2019, p4) and provide care that is based on evidence and clinical judgement (NMC 2011). In line with the NMC's directive, midwives therefore, not only need to develop confidence in order to raise the awareness of the risks of obesity, they also need to develop their clinical judgment and decision making skills in order to raise difficult topics that may support good pregnancy outcomes. It appears that tension may exist at this juncture for professional midwives as they attempt to discuss risk and promote normality simultaneously (4.3.2), this has resonance with the findings of (Scammell and Alaszewski 2012).

Two other professional issues that have arisen in recent years pertaining to information giving are the Montgomery ruling (Chan et al. 2017) and the professional Duty of Candour (Glasper 2017). The former refers to a high court ruling stating that all service users should be given full and detailed information with respect to any identified risk factors prior to accepting care and the latter advocates for transparency in healthcare when adverse events occur. Despite understanding that being obese whilst pregnant carries incumbent risks for mother and baby, not all of the midwives who took part in this study appeared to raise the issues with women and this calls in to question whether they are fulfilling their professional duty or are being true to their Code of Practice (NMC 2018) or the Midwives Standards (NMC 2019). Whilst midwives do not consent women for surgical procedures, their knowledge and understanding pertaining to the incumbent risks of obesity suggests that they should ensure that women are adequately provided with information that may influence them to alter their lifestyle in order to reduce their risks of encountering complications during the pregnancy, labour and childbirth and promote the

good health of the offspring. This may be beneficial in light of findings by Jewell et al. (2014), McGiveron et al. (2014), Ronnberg et al. (2014) and Haby et al. (2015) who all suggest that modifying diet and increasing physical activity may have a positive effect upon pregnancy outcomes. As accountable professionals, midwives have a duty to remain up to date with respect to current professional knowledge (NMC 2019). The above evidence pertaining to diet and physical activity is an example of this. Understanding the risks of living with a raised BMI≥30kg/m² and the evidence that now exists with respect to modifying these risks should therefore be in the midwives' repertoires and they should be able to discuss these issues with women with confidence.

For some, this may mean stepping out of the paradigm of normality into one that is more aligned to the risk management model of obstetric medicine. Therefore, the midwives may be moving from Paradigm 'X' to Paradigm 'Y' (Seedhouse 2009) as they modify their practice from one of promoting normality to one of managing risk, taking the woman's wishes into account.

5.2.2 The (Apparently) Rigid Antenatal Care Schedule

The currently used antenatal care schedule (Appendix 1) advocates that pregnant women should receive thirteen or so visits to a healthcare professional (usually a midwife) at various time points during pregnancy (NICE 2008, updated 2019). The schedule has altered little over the years despite Sanders et al. (1999) assertion that the number of appointments could be reduced without compromising safety. However, Sanders et al. (1999) go on to explain that reducing the number of antenatal visits was not always acceptable to women and that the notion appeared to cause tension for midwives. The current, antenatal care schedule as advocated by the NICE guidelines (2008, Updated 2019) recommends that healthy pregnant women should be offered ten antenatal appointments at various time points during their first pregnancy and

seven during their second or subsequent pregnancy where no risk factors exist. The NICE guideline (2008, updated 2019) is extensive and identifies risk factors that professionals should be alert for when providing antenatal care that may trigger more enhanced monitoring or referral to obstetric specialists, many of which pertain to public health and lifestyle issues. Examples of such issues are; women who are exposed to little sunlight, alcohol use and smoking during pregnancy; domestic abuse; risk factors for gestational diabetes of which living with a raised BMI is one. Extensive advice with respect to the information pregnant women should receive regarding their health and wellbeing and at what point in the pregnancy this information should be provided is also given in this guidance. When one considers the complex nature of the issues that midwives are expected to raise with women, the currently accepted antenatal care schedule that is followed in South East Scotland (Appendix 1) may be a potentially inhibiting factor both in terms of the number of meetings that occur and the time allocated for each one.

Currently in South East Scotland, ninety minutes is the time allocated for the booking (first) appointment; each appointment thereafter is allocated twenty minutes (4.5.3). A simple calculation therefore, informs us that the total time that a woman may see her midwife for is four hours and thirty minutes where a pregnancy is developing normally. Participants in this study appeared to be reluctant to deviate from this schedule despite being aware that at times it may have been beneficial, in light of the extensive public health material that they are expected to discuss with women, to offer women *more* rather than less appointments. (4.5.3). It is not entirely clear why some midwives believed this to be an effective suggestion, it may have been borne out of compassion and empathy for the women because the midwives appeared to have an awareness that pregnant women were being *'overwhelmed'* with the information and that they were being provided with too much at one time (4.5.3). Alternatively, it could be as a result of the midwives believing they *had* to include every topic the organisation put to them for discussion with women rather utilising their clinical judgement and decision making skills and

raising only topics pertinent to individual. These findings have resonance with Sanders et al. (2016) who suggest that despite high levels of engagement in the public health agenda within maternity care, midwives were restricted in time, training and resources when issuing public health information to women. The nature of 'training' that is required for professionals is not given but findings from this study suggest that further education with respect to clinical judgement and decision making be valuable for midwives.

The antenatal appointment however, does not just consist of providing information to women. It also encompasses a structured physical examination of the woman including blood pressure (BP) measurement, urinalysis, and abdominal examination and auscultation of the fetal heart sounds as well as offering public health and health promotion advice (Bharj & Daniels 2017). This apparently time pressured appointment system appeared to cause tension for some participants with respect to the limited time that is allocated to complete all the necessary tasks, particularly during appointments where several clinical tasks were required to be carried out (4.5.3). Whilst offering additional appointments to women may go some way to solving the problem of this apparently rigid system for some midwives, it may not be acceptable to women, particularly when they have other personal commitments .

One perhaps, should also accept that women themselves might not feel that they require any additional discussions with respect to public health messages or their lifestyle choices even if professional knowledge suggests these choices may be harmful to them or to their unborn babies such as smoking or living with a raised BMI≥30kg/m². Recent evidence corroborates this suggestion (Atkinson et al. 2016) suggesting that the influence that healthcare professionals have on pregnant women was less effective than previously thought. However, as the new aspirational model of care is developed across Scotland (The Best Start 2017) it is anticipated that midwives will be in an optimal position to enter in to detailed conversations with women and their families regarding their health and wellbeing during pregnancy. This an innovative model

of care that has three main aims; to provide continuity of carer, to provide person-centred and neonatal care and to continue with multi-professional care when it is necessary for some families (The Best Start 2017, p6). Practicing within this model will, it is anticipated, promote the concept of one-to-one midwifery care where the woman and the midwife will develop an effective partnership where the individual needs of families are met, ensuring that antenatal appointments are timed to support each woman. This model of care will also facilitate midwives to develop, in partnership with women, personalised care schedules that will promote normality (Moncrieff 2018). Another potential solution to the issue of rigid and time limited appointments that emerged from the data was to increase the length of the appointments, allocating forty minutes to each one (4.5.3). However, this may not be acceptable to women, particularly if they have no concerns about their health or lifestyle choices (as mentioned above) and raising such issues may negatively impact upon the midwife/woman relationship. Concern regarding damaging the (valued) woman/midwife relationship has been cited by other authors in national and international contexts (Schmied et al. 2010; Smith et al. 2012; Heslehurst et al. 2013; McLeod et al. 2013; Foster & Hirst 2014; Knight-Agarwal et al. 2014; Singleton & Furber 2014; Pan et al. 2015; MCParlin et al. 2017). This is perhaps one of the main tensions for midwives when they attempt to engage women in conversations about lifestyle issues, particularly living with a raised BMI≥30kg/m². Conversely, however some women may appreciate any additional time invested in their health during pregnancy, particularly if they have additional issues that *they* would like to prioritise, for example mental health issues (4.3.2), in addition, recently emerging evidence (2.5) suggests that information pertaining to diet, nutrition and physical activity suggests that women may welcome lifestyle advice. Being in possession of this information regarding what service users would appreciate therefore, should empower midwives to raise issues surrounding diet, nutrition and physical activity of their own volition.

The findings from this study did not illuminate why women were not offered a more flexible approach to their antenatal care. This may have been due in part to the inexperience of the

researcher not utilising 'probing' questions at key moments (Brinkman & Kvale 2015). However, there may also be a sub-conscious understanding on the part of the midwives that they have no authority to change appointment schedules, but as accountable professionals it is in their remit to do so, suggesting that they perhaps need to feel empowered (by higher authority) in order to alter these appointments in order to meet individual needs. More work may be required to investigate the concept of professionalism and autonomy amongst midwives, exploring why they appear to follow prescriptive patterns of care and what they perceive to be the barriers to altering the service they provide.

5.2.3 The 'tick box' Nature of Electronic Questionnaires and Standardise Approach to Care

A relatively new innovation in healthcare systems that has been seen in healthcare over the last ten years or so, has been the move from paper to electronic note taking, a system that allows centralisation of all documentation and easier access for all appropriate personnel (Payne et al. 2017). The specific area in which participants of this study practiced had moved to one such electronic system in 2008. The system provides questionnaires that are to be completed during each care episode and those pertaining to the antenatal booking appointment appear to be somewhat prescriptive encompassing many closed questions (Brinkman & Kvale 2015) as can be seen in Appendix 16. Whilst this 'tick box' approach may be useful for some midwives in operating as an 'aide memoire' (4.3.2), there is a potential disadvantage to this approach; that of an appointment not being woman focused or woman focused enough. The prescriptive nature of the electronic questionnaires (4.3.2) suggests that there may be an increased risk of key health issues that are important to the woman being omitted during some appointments and this, in turn, may inadvertently lead to detrimental care for the woman and her unborn baby.

The antenatal booking appointment follows a standardised approach aimed at facilitating consistent practice (NICE 2019) when taking a detailed history from newly pregnant women that pertain to their social, medical and obstetric histories. The questionnaires currently used do appear to direct professionals to enquire about all of the above mentioned areas of a woman's life but there is little scope to be flexible about some areas of enquiry with only a 'tick box' provided for some areas (Appendix 16). Whilst this may potentially inhibit more detailed enquiry from a professional perspective, there may also be a risk that the woman will not be able to voice her own concerns and worries due to the nature of some leading and potentially inflexible questions.

Findings from this study suggest that participants do try to focus on the particular needs of the women by engaging in more woman-focused discussions (4.3.2). There is a suggestion however, that this may cause tension for some due to an awareness that their documentation may be audited by the organisation (4.3.2). Clinical audit is necessary to assess practice and to improve health outcomes (Burgess 2011). It is a means of gathering data that will inform future practice (Ashmore et al. 2011). These definitions of clinical audit suggest that this process is not concerned with individuals' practice but aims to capture data that will give an overall view of healthcare input and the subsequent outcomes. Ashmore et al. (2011) go on to explain that most data captured is of a quantitative nature. It is unclear if the questionnaires cited here are audited and if so, what information is captured. However, it is unfortunate that midwives should feel tension regarding this means of quality control because by articulating their rationale for including/omitting particular topics during appointments, they are demonstrating how they are critically appraising their work and simultaneously fulfilling the professional accountability that they have to themselves, the woman to whom they are delivering care and the employing organisation.

The afore mentioned questionnaires that are currently used in the service do make some allowance for raising topics such as illicit drug use, mental health history and domestic violence and issues surrounding diet and exercise. This document also appears to be aligned to the locally used 'Obesity Guideline' (Appendix 17) that asks for a lifestyle assessment to be made for each woman who has a BMI≥30kg/m², however there is little information within it about what this means in terms of what specific aspects of lifestyle to discuss. The electronic questionnaires also appear to lack cues for professionals and assume that every midwife is knowledgeable about any and all issues relating to diet, nutrition and weight management and that they are adequately equipped to discuss these. Findings form this study however, suggest that to provide women with such comprehensive information in the absence of specialist knowledge and during time constrained appointments is challenging (4.4.3).

Evidence from this study suggests that professionals do attempt to engage in conversation with women with respect to other uncomfortable topics such as smoking, drug and alcohol addiction and domestic violence (4.3.2). However, they appear to find discussing weight and weight management difficult and rely upon various strategies to open the conversation (4.3.2). Having had access to other educational resources pertaining to other sensitive issues, the participants appeared to feel empowered, or to have been given 'permission' to discuss these topics (4.3.2), their confidence in doing so also appears to have grown as a result of this investment in education. These findings have resonance with Wangberg et al's. (2015) study that showed when midwives received targeted education with respect to alcohol use they 'almost always' asked women about their alcohol consumption. If women are to receive detailed advice with respect to their body weight, diet, nutrition and weight management, it is logical to understand that a first step in this chain should be to ensure that professionals have access to relevant educational resources pertaining to the issues that surround living with a raised BMI≥30kg/m². Education pertaining to ***how*** to provide women with effective information on how to minimise

their risks during pregnancy may also be useful and this means that for some, changes in their practice pertaining to communication and consultation. Walker et al. (2018) advocate that that by facilitating small changes in practice relevant, effective and adequate advice can be provided to women during pregnancy. They advocate a five-point approach to support women that encompasses asking permission (to discuss weight), assessing, advising, agreeing (weight management plan) and assisting the woman in maintaining these changes. Electronic questionnaires designed to take account of this structured approach may be useful for healthcare professionals following appropriate educational input. Walker et al's. (2018) findings and evidence that has emerged from the research reported here, all suggest that carefully designed educational resources that encompass issues surrounding obesity may be beneficial for midwives when supporting pregnant women who live with a raised BMI≥30kg/m². Furthermore Swift et al. (2013) identified that there was an appetite amongst student nurses for education with respect to caring for individuals with obesity. Undergraduate student midwives and currently practicing midwives may also have an appetite for similar education that surrounds issues pertaining to obesity. However, more work around this educational issue may be required.

5.3 The Communication and Consultation Skills that Midwives Utilise

Communication is a key part of any healthcare professional's role and is an essential skill for practitioners to be competent in (Neighbour 2005; Munson 2007; Silverman et al. 2013). It is therefore important that midwives like any other group of practitioners should strive to achieve communication skills to the highest possible standard. At its most simple, communication is the passing of messages from one individual to another using speech (Jomeen 2017). Consultation however is different; it is defined by Collins English Dictionary as a formal meeting with an expert to receive specific advice about a topic. The role of the midwife, in the context of antenatal care is to act as a consultant, giving accurate and evidence based advice with respect

to both low and high-risk pregnancies. However, the role of the midwife is perhaps more complex than just one of transmitting information. There is evidence within the literature that building relationships with women in order to support them as well as advising them is a key part of the role (Foster & Hirst 2014; Jomeen 2017; McParlin et al. 2017). The importance of this relationship is advocated in the national driver documents as being a positive force in a woman's life (Pathways for maternity care 2009; Midwifery 2020 2010; The Best Start 2017). Evidence that emerged from the data suggested that participants in this study also appeared to believe that the woman/midwife relationship played a central role when providing care to women and facilitated an atmosphere where effective two-way communication could take place (4.4.1).

The midwives who chose to participate in this research appeared to pride themselves on being 'good' communicators believing they had the ability to build positive relationships with pregnant women (4.4.1). However, when probed more closely about their interview or consultation techniques, many of the midwives said they had learned these skills 'on the job' by observing mentors and deciding for themselves what was 'good' or 'sub-optimal' practice, they then developed or *constructed* their own particular way of practicing . Silverman et al. (2013, p.7) however, caution that "experience alone can be a poor teacher"; practitioners therefore need to be mindful of how they approach consultation situations with women during the course of their professional work because they may not be as proficient as they believe themselves to be. This area of practice may be improved and further developed however, and exposure to developmental education may go some way, as demonstrated above, to improving confidence and skill. Whilst this observational and experiential approach to developing communication skills is perhaps understandable in the absence of any formal education that underpins it, there appeared to be a lack of insight by participants as to how consultation differs from communication (4.4.1). This apparent lack of understanding surrounding such skills may be one of the factors that is 'stilting' conversations that are perceived to be difficult to raise. The theory

of working in systems 1 and 2 (Crockskerry et al. 2013a and b) may also be at play as midwives are biased to discussing only what is in front of them in the form of the questionnaires rather than analytically exploring other issues that may be of benefit to raise with women.

The Calgary-Cambridge model of consultation (Silverman et al. 2013) offers a potentially flexible but structured approach to listening, history taking and information giving. It is described in four stages; initiation, gathering information building the relationship and explanation and planning. By utilising this model, there is a suggestion that the woman would be able to raise topics *herself* that are of importance to *her* and in an order of priority that is decided upon by *her*, this approach may then allow for careful discussion and exploration of each topic as prioritised by the woman. By placing the woman at the centre of her own care in this way, the risk of omitting pivotal topics (that the woman has identified) during antenatal appointments may be reduced. Utilising a model of consultation such as this may empower professionals when raising issues that are considered to be sensitive, allowing them to impart healthcare information and public health messages in a clear and concise manner and with adequate explanation as to why they are important to focus upon. This woman-focused approach may also facilitate midwives with the freedom and autonomy to omit information that may not be relevant for some women. An example of this would be offering contraceptive advice to a woman who has conceived following assisted conception treatment. This systematic approach therefore, may allow midwives to support women to optimise their health at a significant time in their lives and they may be able to achieve this in a systematic and woman-focused manner that does not require the use of the currently prescriptive electronic questionnaires.

Silverman et al. (2013) suggest that communication skills should be taught to healthcare professionals in as robustly a way as any other clinical skill and the Calgary-Cambridge model of consultation as advocated by Silverman et al. (2013) appears to be a model that would lend itself to midwifery practice. The midwives in this study appeared to be cautious when required

to raise difficult or uncomfortable topics as they were concerned that by doing so, women may be alienated or that they may cause offence, in keeping with other international findings (Heslehurst et al. 2013; Knight-Agarwal et al. 2014; Pan et al 2015; McParlin et al. 2017). The Calgary-Cambridge model of consultation (Silverman et al. 2013) suggests however, that with appropriate education, it is possible to build rapport and raise sensitive issues in a way that is supportive and helpful for individuals. Currently, it appears that some of the participants in this study may have felt challenged when raising discussions around sensitive topics, especially in the context of acquiring and delivering voluminous information during what are relatively short appointments.

Whilst the Cambridge-Calgary model is one model of consultation, other methods of communication that could support women also exist. Motivational interviewing is another approach that may be helpful for some. This is a specialised method of counselling aimed at increasing an individual's motivation to change behaviour (Fu et al. 2015). Educating midwives to utilise this form of communication may prove useful in the context of supporting women with diet, nutrition and weight management issues during pregnancy, especially in light of Wangberg et al's. (2015) findings, suggesting that midwives became more confident in raising questions with respect to alcohol consumption. Nesbitt et al. (2014) also noted that following education aimed at developing motivational interviewing, professionals began to practice in a more person-centred way, only offering advice after gaining consent and making use of open questions. Whilst this is encouraging, given the time constraints that professionals meet during antenatal care provision (that have been cited many times by participants) (4.5.3), to conduct a thorough motivational interview during antenatal appointments may not be practical, however, utilising some of the key skills used in motivational interviewing may be useful for midwives during these routine appointments and this may support practice.

5.4 Midwives as Public Health Agents

5.4.1 The Public Health Role of the Midwife

A significant finding from this study has been the discovery of the scope and volume of public health information that midwives are expected to transmit to women during antenatal appointments. Public Health as defined by Acheson (1988) is "the science and art of preventing disease, prolonging life and promoting health through the organised efforts of society". (NHS Scotland 2010). Public health policy therefore, is concerned with protecting populations and has three domains according to Gillam (2012) – health improvement, health protection and service improvement. In the context of delivering these messages to individuals however, the task becomes more complex (Smith 2017). Midwives in South East Scotland appear to have been identified by strategic planners as occupying a key position within the organisation from which to deliver these messages. Pregnancy, it is believed, provides a window of opportunity to develop a prolonged relationship between the woman and the healthcare professional (Ross-Davie et al. 2006; McNeill et al. 2012; Murphy et al. 2016; Murphy 2015) and it is thought that this facilitates an ideal opportunity to deliver health promotion and public health messages. In addition to the situational position that midwives occupy in a woman's life, there appears to be an understanding that women will be receptive to public health messages whilst they are pregnant and act upon them (Phelan et al. 2010; Atkinson et al. 2016). These two factors therefore, appear to have influenced planners to identify the midwives as appropriate public health messengers.

The midwives in this study however, appeared to be suspicious that the women did not engage with these public health messages and several participants commented that they often found the information leaflets that they issued to women, untouched and still in the 'back pocket' of the case note file at the end of the pregnancy (4.5.1). This finding leads one to ask if there is value in delivering such messages to women in this way. There is resonance here with Atkinson et al's. (2016) study who found that with respect to diet and nutrition, pregnancy was perhaps not

a ‘teachable moment’ and that women made their lifestyle choices autonomously with healthcare professionals being less influential than was previously believed. Although this finding pertains to diet, nutrition and weight management, it may be true of other areas of public health topics and raises questions as to whether the public health messages that midwives deliver to women are actually ‘heard’ or engaged with. By being more analytical and stepping into ‘System 2’ (Crockskerry et al. 2013b), midwives may be able to discern what information women may require that is relevant to them and their family’s needs and this may in turn, may conserve valuable time during the relatively short antenatal appointments to focus upon the woman’s individual needs and her developing pregnancy. Whilst this more analytical approach may support the woman’s choice, there may be a risk that some topics are omitted completely from discussions. This approach in delivering selective messages may be a risk worth taking however, especially in light of Atkinson et al’s. (2016) study that suggests women make decisions autonomously during pregnancy. Therefore, discussing only what the women desire may be an effective use of time during antenatal appointments and simultaneously provide woman-centred care.

The midwives who took part in this study raised concerns about the volume of public information that they were expected to deliver, believing it was large and unwieldy and there appeared to be a sense that this information was expected to be prioritised during antenatal appointments over the needs of the pregnancy (4.5.2). If so, then this may pose a risk to the focus of the antenatal appointment and alter it from that of being woman and pregnancy focused to being a public health or health promotion meeting between the woman and the professional. Despite this risk, evidence suggests that midwives recognise that they do have a role to play in providing public health messages (Ross-Davie et al. 2006; Lee et al. 2012; Crabbe & Hemingway 2014). However, there is also recognition that despite their optimal situation within the healthcare system to deliver these messages, midwives may feel more empowered to deliver these messages following access to

relevant educational resources, enabling them to effectively inform women about a variety of public health issues (Ross-Davie et al. 2006; Lee et al. 2012; McNeill et al. 2012). As discussed in the previous section, some of the midwives who took part in this study felt that their confidence improved after being exposed to educational resources pertaining to specific topics (4.3.2). The Scottish Government appears to recognise the value of midwives in promoting public health messages, suggesting that midwives make a unique contribution to public health (Midwifery 2020 2010) and suggests that they play a central role "in improving health and social wellbeing for all women and reducing health inequalities" (Midwifery 2020 2010, p. 26). However, this document also acknowledges that appropriate education and the use of evidence-based guidelines should be provided in order to support effective practice.

It is of concern that some participants felt 'exploited' (4.5.1) believing that their workload was being increased by decision makers who, they believed, had no or little insight in to the already demanding role of the community midwife or the increasing workload that the public health facet of that role appeared to cause (4.5.1). The findings of this study have resonance with others in the context of public health message delivery (Ross-Davie et al. 2006: McNeill et al. 2012; Sanders et al. 2016) who found that the public health role of the midwife has been poorly defined, despite recognising that midwives are ideally situated to act as public health messengers.

Currently, the favoured mode of delivery of public health messages appears to be leaflet provision and it appears that the midwives who took part in this study understood that they are expected to deliver this literature regardless of other priorities within the appointment as discussed earlier, once more suggesting that this group of professionals are not functioning at graduate level. These publications however, may be subject to bias (Spence 2012) and may not offer a balanced view of particular subjects. Spence (2012), in his editorial, goes on to suggest that in an age where information is readily available, individuals can seek reliable information for themselves from various sources that are available electronically. Providing women with reliable electronic sources

may be more effective than issuing a large volume of printed information, especially in light of evidence that emerged from the data here suggesting that women often sourced their own information electronically (4.4.3). Participants were also suspicious that women did not engage with the literature that the organisation provided. If this perhaps, radical approach, were to be utilised, there would need to be clarity with respect to the electronic sources recommended to women. There may also be cost benefits to taking this approach and asking the women to be more proactive in seeking information for themselves as less printed material is likely to be required. In addition, for some women whose first language is not English, electronic documents may be more acceptable. This approach may assist in making effective use of the limited time available during appointments, however, more work would be required to ascertain if this approach to information giving is a viable option.

5.5 Conclusion

This chapter has discussed three key findings that have emerged from the data; the contextual situation in which midwives operate and how their professional approach may be inhibiting innovative antenatal care schedules. It goes on to discuss how midwives utilise their communication skills and finally the challenge of imparting large amounts of public health information to women in a short time. The issue of time constraints has also been a theme that has pervaded throughout this discussion and this too be considered a barrier for midwives when attempting to provide holistic care to women and their families.

Professional midwives are expected to provide holistic woman-focused care and appear to be ideally situated to do this during the antenatal period. However, they face challenges in their practice that appear to cause tension for them in their daily work. A central tenet of midwifery practice is to encourage normal birth and reduce unnecessary intervention. However, in the current UK context the rate of women presenting for care with pre-existing co-morbidities and social complexities is rising and midwives are increasingly finding themselves providing care for

those with ‘high-risk’ as well as ‘low risk’ pregnancies necessitating much more detailed discussion and monitoring during appointments for some women. This has perhaps seen community midwifery practice in the early 21st century alter and become more blended with the medical obstetric paradigm. This in turn may be causing tension for midwives as they reconstruct their practice to meet the changing needs of the pregnant population. Despite these tensions, midwives appear to view the relationships they build with women as a necessary foundation on which to build effective care. Developing a trusting relationship with women appears to be an aspect of care provision that they value and strive to develop.

Perhaps one of the most challenging parts of the community midwifery role is that of public health messenger. Strategic planners appear to have identified midwives as being ideally situated to provide these public health information to women but this is challenging within time limited appointments. Whilst midwives appear to recognise that they have a role within the public health arena, it appears to be been poorly defined and this has resonance with findings from other studies.

Evidence from this study also suggests that access to educational resources pertaining to specific subjects may be beneficial for midwives and may strengthen their confidence and skills. Enhanced knowledge and understanding may be of particular importance when discussing diet and nutrition with women who present with a raised BMI≥30kg/m², especially in light of the evidence that suggests women would welcome advice regarding diet and nutrition. Midwives however, have a professional duty to maintain their own knowledge and skills and so the responsibility for education does not lie solely with the employing organisation. Finally, the findings from this study suggest that midwives should explore with individual women what their particular needs are and ensure that any discussions encompass these needs rather than providing everyone with the same information indiscriminately. This finding suggests that by

developing clinical judgement and decision making skills, midwives can continue giving the high quality care that they already do but in more individualised way (Renfrew et al. 2014).

5.6 Implications for Practice and Practice Development

The findings of this study suggest that midwives view themselves as supporters and advocates of the pregnant women in their care whether they have 'high' or 'low' risk pregnancies. However, findings from this study suggest that there are areas where they could be more proactive and take ownership of their professional autonomy as mentioned above. In addition, midwifery practice may be strengthened if professional skills with respect to consultation and interviewing were further developed. As professional people, midwives have a responsibility to maintain their own knowledge and skills and to keep themselves updated with respect to continually developing professional knowledge (NMC 2018; NMC 2019), this is encompassed within the concept of professionalism (Frain 2018). Incorporating such education at undergraduate and postgraduate level may go some way to enabling/empowering midwives to develop autonomous practice and enable them to take ownership of their professional role as they develop and construct individualised antenatal care with and for women. For some midwives, self-directed learning may be effective and empower them to develop and utilise these advanced consultation/interviewing skills, however, more formal education may be of benefit for others so employers, educators and professional leaders may have to consider this when designing and developing educational programmes, ensuring that such topics are included.

The issue of delivering public health leaflets to all women proved to be a challenge for the participants of this study and as previously discussed (4.5.1), the midwives believed that there was little evidence that the women engaged with these documents. The public health role of the midwife appears to be poorly defined (Ross-Davey et al. 2006; McNeill et al. 2012 and Sanders

et al. 2016) but despite this, community midwives appear to be expected to provide public health messages to women indiscriminately. However, leaders and practitioners from these two closely related disciplines may need to consider alternative methods of delivering these messages in a way that is valuable to the women and time effective for midwives, especially when recently emerging evidence suggests that pregnancy may not be a 'teachable moment' for women as was previously thought (Atkinson et al. 2016). A conceptual framework illustrating how these suggestions can be seen below in figure 4.

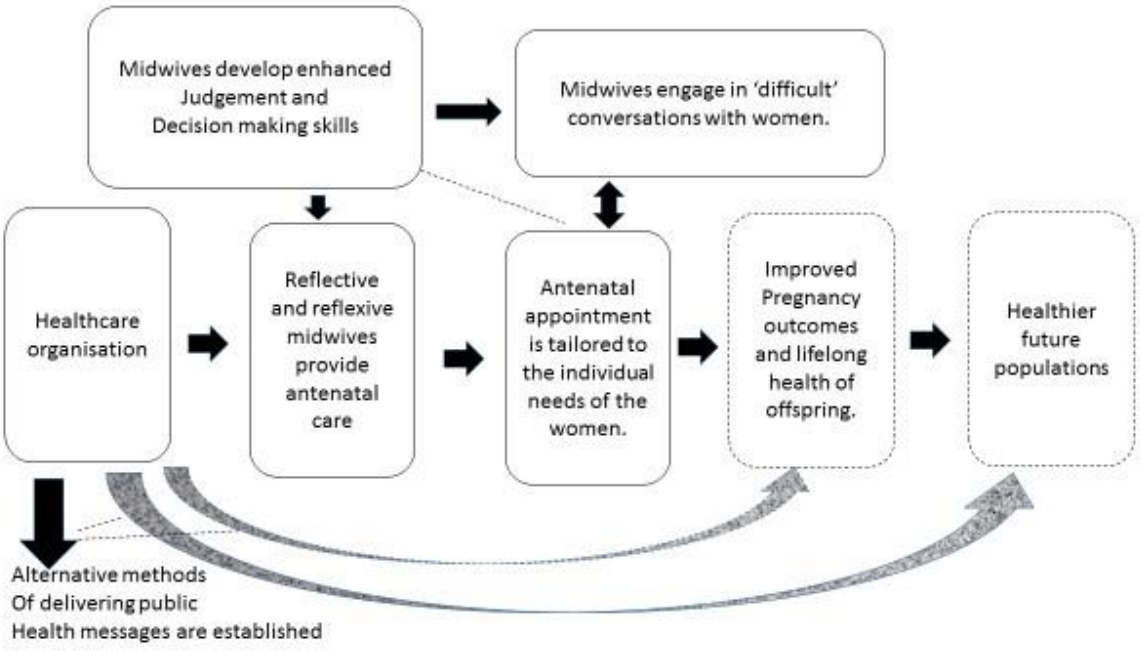

Figure 4. Conceptual framework illustrating how adjusting midwifery practice to a more analytical approach may be of benefit to pregnant obese women.

Figure 4. Conceptual framework illustrating how adjusting midwifery practice to a more analytical approach may be of benefit to obese pregnant women

6 Concluding Chapter of Thesis

6.1 Limitations of Study

This was an exploratory study, the findings of which are not generalisable, however, they do provide some insights into the challenges that community midwives are presented with when they practice in a large, complex process driven organisation. The midwives who took part were all self-selecting and data collection achieved by employing in-depth interviews and inviting participants to complete practice diaries. All of the data gathered was self-reported and this was perhaps another limitation of this study. It is possible that an objective observational approach may have illuminated areas of practice that were not described by participants, this more objective approach may have added another dimension to the data and consequent findings. With hindsight, it may have been more effective to have issued the practice diaries at the time of arranging the interview rather than after it in order to avoid the interview itself influencing practice as one participant demonstrated.

"…after my interview for this study, I felt more confident to discuss increasing her exercise and eating a healthy diet…" (Mandy, 3 years experience).

No other comments in the diary data were as explicit but other participants may have had similar thoughts. This is a consideration that will be taken forward as research into this area of practice develops. Another limitation of this study was that opinions of the pregnant women were not sought, this also may have added another dimension to the data. However, this was a conscious decision because the aim of this study was to explore midwifery practice in the context of community midwifery care and to hear the midwives' story.

6.2 Dissemination of Findings

It is anticipated the findings from this study will be published in relevant peer reviewed journals pertaining to public health, midwifery and healthcare management pertaining to how midwifery practice could be strengthened by including theories of consultation in both under-graduate and post-graduate levels. In addition, the value of critiquing and applying theories of clinical judgement may also be of use and it is hoped that these research findings will be taken forward. Preliminary research findings were presented at the Royal College of Surgeons in Ireland in February 2019 and more extensive findings will be presented at the International Confederation of Midwives Conference in Bali, Indonesia in June 2020. A local research forum is planned early in 2020 to which local midwifery managers, midwives and academic colleagues will be invited. It is hoped that this event will be thought provoking for both practicing midwives and managers who attend and that such an event will influence individuals to reflect upon their current practice with a view to considering a change practices in the future.

6.3 Future Research Surrounding Community Midwifery Practice

As mentioned above, this study offers insights in to how community midwives practice and what they perceive the barriers and facilitators are for them as they attempt to construct their practice with respect to discussing living with a raised BMI in a meaningful and non-judgmental way with women. This study has illuminated some facilitators that exist for midwives as they provide care to women but other areas of practice have also been identified that merit further research. This study, as previously mentioned, did not include the views of the women. Exploring how acceptable it is for women to receive public health messages in leaflet form may be of benefit in informing future practice. Further research exploring how to optimise the delivery of these messages may also be beneficial. Research exploring how midwives develop their professionalism, take ownership of and critically evaluate their practice may also warrant further exploration, especially in the context of being NHS employees and therefore bound by

organisational boundaries. Currently the RCOG (2018) guideline suggests that no advice should be provided to women pertaining to weight gain during pregnancy. Findings from this study however, have illuminated inconsistent practices and that women are often given inconsistent and conflicting information. This is diametrically different to the RCOG advice. Further work therefore is required to determine what the optimal weight gain may be for women during pregnancy in order that the conflicting advice currently provided for women is minimised.

Sinclair and Dornan (2017) suggest that integrating research into practice can be rewarding and can have a positive impact on the health of women and their babies. However, they caution that care must be taken prior to doing this and that best evidence must first be sourced and carefully appraised prior to applying it to practice. It is unlikely that the findings from this study will impact upon current practice. It is a small study and was exploratory in nature. However, the findings are informative and will be instrumental in designing future comparative studies where one group of midwives may receive specialist education about consultation skills and/or nutrition and physicial acitivity during pregnancy and another group will practice as they currently do. The findings from such a study may then go on to influence both midwifery education and practice and this in the long term may have an influence on the health and behaviours of pregnant women and their families. Such a study is currently being formulated and is hoped to commence in late 2020 or early 2021.

6.4 Critical Reflection

Critical reflection

Being a midwife means practicing as an accountable professional and providing evidence based care to women and their families (NMC 2019). It also means having a commitment to lifelong learning (Macdonald 2017). Whilst other practitioners may not feel that studying at doctoral level is an appropriate course of action, for me it was a natural step. Taking forward a ‘hunch’

that had presented itself in clinical practice and to investigate it in a scholarly way with the hope that it would contribute to the professional knowledge base was, for me, logical. According to Jarvis (2009), learning starts with experience and indeed that is how this doctoral journey began.

Initially I had a belief that community midwives would benefit from receiving education pertaining to the issues that surround being obese during pregnancy. However, on commencing my doctoral studies and following discussions with academic supervisors, it became clear that my somewhat narrow view of community midwifery practice was 'shallow' and had been arrived at by making assumptions. It was essentially biased (Hardman 2009) within my own framework of reference where I envisioned that midwives had little else to do but discuss with obese pregnant women the risks to themselves and their unborn babies. Recalibrating this way of thinking was something that took time and patience and was, in itself a process that required stillness and careful thought (Nixon & Adamson 2010) and eventually the contemplative and methodological thought processes necessary for doctoral level thinking began to develop. I understood that a more exploratory approach would be required to ascertain how community midwives worked an in what structures they did so.

The philosophical decisions that were made in order to underpin this study were challenging, however, as mentioned in chapter 3 (3.10) after recognising that midwives are situated in a complex 'web' of organisations I was able to visualise the profession and the way in which midwives practice as 'constructs' where there is shared behaviours and language (Gergen 2015). This allowed me to view practice in a different and objective way and led me to understand that community midwives appear to have *constructed* a unique set of practices that differ from midwives who practice in a hospital setting (my own place of practice) and to understand the challenges facing them. This understanding brought with it feelings of

excitement that I was progressing and that I would successfully complete my doctoral journey, however, there were times where I was filled with self-doubt and feelings of negativity and failure. Herman (2010) suggests that although little is currently understood about the feelings/emotions that doctoral students experience, there is a body of literature that is expanding in this area and that this population of learners experiences many emotions during the course of their studies. This was useful and lessened my feelings of isolation as I struggled to cope with the 'roller coaster' of emotions that caused heightened levels of anxiety that threatened to arrest my progress. Despite this, with the excellent support of supervisors I continued to put "one foot in front of the other" (Wagner 2010, p 31) in order to reach the level of thinking required for doctoral level study and to carry out all the steps necessary to undertake research.

Although this study has been undertaken as part of an educational programme, it is rewarding to understand that the findings will contribute to the professional body of literature and it is hoped, advance practice. My initial thoughts as to what the practice 'problem' was, have been proven inaccurate or incomplete. The findings from this research suggest that midwives may benefit from engaging in education with respect to their practice. However, it is education pertaining to consultation skills that may strengthen practice and not education pertaining to the knowledge around obesity itself that may improve pregnancy outcomes for some women. This understanding facilitated a real shift in my thinking and in how I viewed both community midwifery practice and the contribution that research makes to professional practice.

As expected, this doctoral programme has been challenging. It has however, allowed me to develop and grow not just as a professional midwife, but also as a critically reflective and reflexive researcher. My own critical thinking skills have developed and this, I continue to recognise as I concurrently practice clinically and focus upon research practice. Jarvis (2009),

in his conceptual diagram (Jarvis 2009, p 24) suggests that individuals change and become more experienced as a result of a learning journey. This is a concept that I positively identify with because I now recognise that my approach to professional issues (clinical and academic) has become more analytical and critical. I am aware that I often 'slow' my thinking down and am much more measured in clinical situations, adopting a 'system 2' way of working (Crockskerry et al. 2013b). As a novice researcher who aims to develop a career in academia, my goal is to continue developing these skills in order to contribute to the body of knowledge that will assist in advancing midwifery practice and amplifying the voice of midwives in the 21st Century.

6.5 Conclusion

The role of the community midwives in the early part of the 21st century appears to be multifaceted and is expanding and diversifying in response to the changing needs and characteristics of the pregnant population. Midwives are the first point of contact for women in South East

Scotland and are expected to provide antenatal care to women who present with both 'high' and 'low' risk pregnancies. This appears to provide tension for them as they move between the paradigms of obstetric medicine and 'normal' midwifery care, attempting to blend the two paradigms and construct community practice providing parity to all women.

As discussed at the beginning of this thesis (1.2) obesity is now one of the major public health concerns across the globe. In response to the rising rate of obese pregnant women presenting for maternity care, national and local protocols have been developed to support practice in order that safety of mothers and babies is maintained. Midwives however, appeared to view these documents as prescriptive and although they appeared to recognise that obese women are at risk, not all of them engaged in dialogue with the women that allowed them to make an informed

choice about any additional investigations or monitoring that was offered to them. If midwives are to be true to their 'with woman' role (Midwifery 2020 2010; Renfrew et al. 2014) then they need to be proactive and advocate for women, ensuring that the needs and choices of the woman are prioritised and not the needs of the organisation during the antenatal course.

Midwives have been identified as being 'ideally placed' (Ross-Davie et al. 2006; McNeill et al. 2012; Murphy 2016 and Murphy 2015) to delivery public health messages, just as pregnant women have been identified as being receptive to receiving such messages and being in a position to make lifestyle choices that will optimise their health both during and beyond pregnancy. However, the midwives who took part in this study appeared to experience tension as they strived to deliver both antenatal care and public health messages to all women in the context of time constrained antenatal appointments. By adopting a more analytical approach and making careful clinical decisions regarding what is/is not pertinent for individual women a more robust model of practice may be established. Midwives therefore need to be adequately equipped to deal with this more analytical way of working and in line with the Standards of Proficiency for Midwives (NMC 2019) be 'courageous' (NMC 2019, p 15) as they make these discriminate decisions. If conversations pertaining to being overweight or obese are not entered into with obese pregnant women then it is unlikely that women will be adequately informed or that their health behaviours may change and this in turn, may be detrimental to maternal health Midwives need to recognise the potentially important role that they can play in supporting obese women to control their weight during pregnancy and thereby ensuring that the health of future generations is protected.

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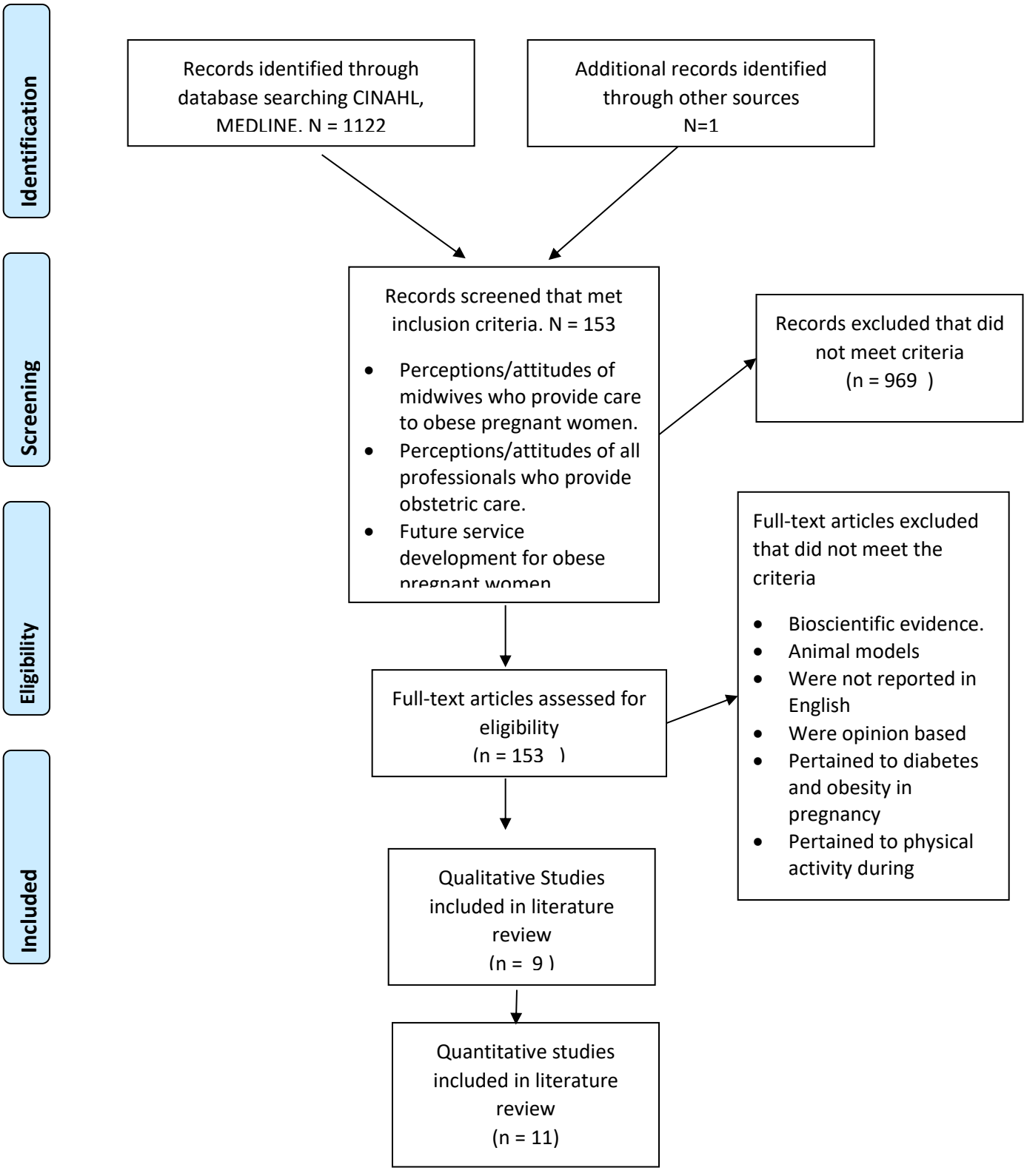
Appendix 1 - Schedule of Antenatal Care in South East Scotland

Time point in pregnancy (weeks gestation)	Components of Appointment
6-8 weeks (Booking appointment)	• Demographics • Medical history taking • Obstetric history taking • Bloods for Full blood count, Blood transfusion specimen for 'group and save', Blood borne virus screening (HIV, Varicella) • Provision of pregnancy specific and general public health information. • BMI identified and if over 30kg/m² then a Glucose tolerance test is arranged, • Discussion and consent taking for antenatal screening for chromosomal and neural tube abnormalities.
11-13 weeks	• Booking US (no midwifery input)
16 weeks	• Discussion about progress of pregnancy/anxieties • Physical examination including auscultation of the fetal heart rate, • Blood Pressure • Urinalysis • Full blood count.
18-21 weeks	• Anomaly scan (no midwifery input)
22 weeks	• History taking/discussion about progress of pregnancy • Physical examination including BP, Urinalysis, • Abdominal examination and auscultation of the fetal heart. • Provision of public health information including contraception leaflet, 'baby box' information, Mat B1 form (necessary to trigger maternity leave and pay). • Various other information leaflets
28 weeks	• History taking/discussion about progress of pregnancy • Physical examination (as above) • Blood specimens for routine blood 'group and save' and full blood count. • Administration of Anti D injection (if Rh negative). • Provision of public health information

Time point in pregnancy (weeks of gestation)	Components of appointments
36 weeks	• History taking/discussion about progress of pregnancy • Physical examination including BP, pulse, • Urinalysis • Provision of public health information. • Abdominal examination including auscultation of the fetal heart rate.
38 weeks	• History taking and discussion about progress of pregnancy • Physical examination, BP, pulse. • Urinalysis • Physical examination including auscultation of the fetal heart. • Discussion about onset of labour
40 weeks	• History taking and discussion about progress of the pregnancy • Physical examination, BP, pulse • Abdominal examination and auscultation of the fetal heart rate. +/- vaginal examination to assess the cervix/onset of labour. • Discussion about induction of labour
41 weeks	• As 40 week appointment. • Discussion re induction of labour +/- vaginal examination to assess the cervix.

Appendix 2 – PRISMA chart demonstrating how the reviewed articles were identified.



Appendix 3 – Data summary table of quantitative studies (Adapted by Greenhalgh 2014)

Authors/date	Title	Research question/aim	Pilot undertaken	Population	Administration of questionnaires	Response rates and numbers	Findings/results
Arrish et al. (2016)	Australian midwives and provision of nutrition education during pregnancy: A cross sectional servey of nutrition knowledge, attitudes and confidence.	To investigate knowledge, attitudes and confidence of midwives when they provide nutritional education to women.	No but the questionnaire was carefully developed in collaboration with dietitians and statisticians.	Open to all Australian midwives who were memebers of the Australian College of midwives	Sent out in a routine newsletter. Response was taken as consent.	4470 questionnaires sent out. 393 returned. 329 (6.9%) completed and included in analysis.	Midwives have inadequate knowledge of nutrition. Low confidence when discussing this with women. Low level general advice was given to women.
Biro et al. (2013)	How effectively do midwives manage the care of obese pregnant women?	To examine midwifery clinical practice for obese pregnant women	No but a validated questionnaire was used	333 Australian midwives	Email only	333 (7%) response rate	Lack of educational provision. Institutional changes needed

Authors/date	Title	Research question/aim	Pilot undertaken	Population	Administration of questionnaires	Response rates and numbers	Findings/results
Herring et al. (2010)	Addressing obesity in pregnancy, what do obstetric providers recommend?	To determine knowledge, attitudes and practices of obstetric providers.	Yes, then developed with the multi-disciplinary team. (later used by Biro et al.)	Practitioners in the USA. 32 obstetricians. 8 nurse practitioners 28 certified nurse midwives	Face to face administration Postal questionnaire	101 (58%) response rate	Deficiencies in knowledge regarding living with obesity. Educational strategies are needed for midwives.
Lutsive et al. (2012)	Little congruence between health care provider and patient perceptions of counselling on gestational weight gain	To determine counselling practices of healthcare providers with regard to prenatal weight gain and the risks of inappropriate weight gain.	Yes but no further details	42 Canadian healthcare providers. 6 obstetricians. 14 family physicians 15 midwives 7 from other disciplines.	Online or paper copy of questionnaire.	Not given and no information about how sampling was achieved.	Impacted by time constraints Poor referral rates to dietitians. Professional belief that counselling is ineffective. Inconsistencies between what women believe they have been given and what **is** given.

Authors/date	Title	Research question/aim	Pilot undertaken	Population	Administration of questionnaires	Response rates and numbers	Findings/results
Macloed et al. (2013)	Provision of weight management advice for obese women during pregnancy: A survey of current practice and midwives views on future approaches	To explore how midwives practice with respect to advising obese pregnant women (about risk)	Yes, then questionnaire modified	Midwives in the Tayside area of Scotland	Online administration to Health Board employees	78 midwives invited. Response rate of 32%	Training is required in order to deliver accurate advice. Few written resources for obese pregnant women. Uncertainty as to the role of the midwife
Pan et al. (2015)	Inceased BMI in preganancy: how do midwife lead maternity carers respond?	To determine the knowledge of midwives and how they adjust their practices to provide care to obese pregnant women.	No	Nationwide survey of all midwives in NZ	Electronic questionnaire	1067 questionnaires sent out. 438 (42.9%) response rate.	Accessing support within the healthcare system was challenging. Discussing weigh was identified as being sensitive and difficult to discuss.

Authors /date	Title	Research question/aims	Pilot undertaken	Population	Adiminstration of questionnaires	Reponse rates and numbers	Findings/Results
Ward (2009)	Managing weight in obese pregnant women	To determine the current provision and utilisation of the current dietetic service by community and hospital midwives for obese pregnant women in NHS Lothian	No	Midwives in the NHS Lothian area.	Online administration	No response rate given. 22 hospital and community based midwives 7 dietitians.	Midwives appeared to be keen to update their knowledge. More education about the topic is required. Poor referral rates to dietitians.
Wilkinson et al. (2013)	Maternal overweight and obesity: a survey of clinicians characteristics and their response to their pregnant clients.	To assess staff knowledge about adherence to and characteristics that influence delivery of care according to guidelines about obesity.	No	Australian midwives.	Email invitation	20 obstetricians 35 midwives 13 AHPs	More education is required. Professional's own body image can influence practice.

Appendix 4 – Qualitative Data Summary Table (Adapted from Walsh and Downe 2006)

Author/year	Title	Aim	Theoretical Framework	Design	Context	Sampling strategy and sample size	Participants	Data collection methods	Analysis	Findings
Foster and Hirst (2014	Midwives Attitudes towards giving weight gain related advice to obese pregnant women.	To explore midwives attitudes regarding givinb weight related advice to obese pregnant women.	Not fully discussed	In depth interviews	Community and hospital settings in the Uk	Postal invitation then purposive sampling	10 midwives from the UK	In depth interviews	Thematic analysis using Colaizzi's 7 stage approach.	4 themes emerged Advice giving is a challenge for practice Midwives have perceive they have poor proficiency when advising women. Time constraints is a barrier for midwives Concern about upsetting women. Lack of guidelines is a barrier.
Furness et al. (2011)	A qualitative study of the perspectives of women and midwives	To explore how current support is perceived with regard to weight management in pregnancy	Qualitative method but the TF is not mentioned.	Exploratory qualitative study	North East England	All midwifery areas. Obstetricians were invited but none responded.	Email invites. No =7	Focus groups	Inductive and thematic using nVIVO8	Explanations for obesity and weight management as to what is the best care for obese women. Concern about stigmatising women. This may be inhibitinhg midwives and acting as a barrier for midwives in raising and discussing the subject of obesity

Author/year	Title	Aim	Theoretical Framework	Design	Context	Sampling strategy and sample size	Participants	Data collection methods	Analysis	Findings
Heslehurst et al. (2013)	Midwives perspectives of their training and education requirement in maternal obesity: A qualitative study	To explore what the needs of midwives are when caring for obese pregnant women.	Interpretive constructionist approach	Focus groups	48 midwives in North East England	Not made clear how midwives were recruited	48	Focus groups	Thematic analysis from taped transcripts.	The midwife's role with respect to Weight management The logistics and practicalities of receiving training Midwives justified their need for further training.
Knight-Agarwal et al. (2014)	The views and attitudes of health professionals providing antenatal care to women with a high BMI: A qualitative research study	To explore the views and attitudes of professionals	Interpretive phenomenology	Focus groups	Australian midwives and obstetricians	Invites via heads of department	28 midwives from both hospital and community	Focus groups	IPA analysis using thematic analysis	Obesity puts the health of mother, baby and professional at risk. Weighing women in out of fashion. Weight is a sensitive topic to discuss. Significant barriers exist for weight control in pregnancy. Professionals and women need to tackle obesity in pregnancy.
Schmied et al. (2010)	Not waving but drowning	To explore the experiences and concerns of professionals who care for obese pregnant women.	Qualitative interprevist method	Focus groups	Australian professionals from 3 hospitals. All areas of midwifery	Poster displays and information sheets left in office areas	34 midwives	Focus groups	Thematic analysis	Obesity is a creeping normality Professionals are bewildered about how to provide care to obese women. Concern about the rapid rise in obesity rates.

Author/year	Title	Aim	Theoretical Framework	Design	Context	Sampling strategy and sample size	Participants	Data collection methods	Analysis	Findings
Stotland et al. (2010)	Preventing excessive weight gain in pregnancy: How do prenatal care providers approach counselling?	To explore prenatal care givers knowledge, attitudes and practices with regard to preventing excessive weight gain in pregnancy	Not discussed	Focus groups	US article (different terminology)	Convenience Sampling	52 professionals Obstetricians. Certified nurse midwives Nurse practitioners	Focus groups	Thematic analysis	Lack of formal training for professionals. Uncertainty and doubt about counselling effectiveness Lack of a baseline assessment when women first present. Lack of personal experience in counselling.
Singleton and Furber (2014)	The experiences of midwives who care for obese pregnant women	To explore the personal experiences of midwives who provide intrapartum care for pregnant women.	Interpretive phenomenology	In depth interviews	Midwives who practice in intrapartum settings	Purposive sampling. Poster displays and information sheets left in office areas	11 midwives who work in labourward	In depth interviews	Thematic analysis	Normal birth is medicalised because of obesity Feelings of helplessness Obese women lose their identities Midwives avoid the topic due to emabarrassment. Little knowledge of how to address the issue Midwives did make attempts to promote normal birth.

Author/year	Title	Aim	Theoretical Framework	Design	Context	Sampling strategy and sample size	Participants	Data collection methods	Analysis	Findings
Oteng-Ntim et al. (2010)	Developing community based maternal obesity intervention	To explore healthcare workers views on the development of interventions for obese pregnant women	Not discussed	Not discussed	Uk study in central London	Purposive sampling for NHS employess. Snowball sampling for other stakeholders	19 participants Midwives Dietitician Obstetricians Lay people	Semi structured interviews	Framework analysis	Currently a lack of existing services Challenges exist about tackling obesity prior to pregnancy. New interventions are required to address this issue.
Smith et al. (2012)	Maternal obesity is a new challenge; a qualitative study of healthcare professionals' views towards suitable care for pregnant women with BMI≥30kg/m²	To explore the views of professionals that will inform the development of future services for obese pregnant women	Not discusses	Semi-structured interviews	Deprives area of England	Purposive sampling	30 healthcare professionals Midwives Sonographers Anaesthetisits Obstetricians	Semi-structured interviews	Thematic analysis	Obesity is a difficult topic to raise during a consultation. Concers exist about the long term consequences of obesity. Obesity is a maternity issues Viewed as a life long issue.

Author/year	Title	Aim	Theoretical Framework	Design	Context	Sampling strategy and sample size	Participants	Data collection methods	Analysis	Findings
Wilcox et al. (2012)	Excessive gestational weight gain:an exploration of midwives views and practices	To explore midwives' views, attitudes and approaches to assessment, management and promotion of healthy weight gain in pregnancy	Qualitative research methods	Semi-structured interviews	Australian study. Set in rural and urban situations	Purposive sampling using written invitations	15 midwives from a variety of practice settings	Semi-structured interviews	Thematic analysis	Gestational weight gain is a low priority for midwives There is concern for the physical and psychological well being of the woman. Midwives are cental to promote lifestyle advice to women and opportunities do exist that promote this in order to promote healthy gestational weight gain.
Wilmore et al. (2015)	How midwives tailor health information used in antenatal care	To examine the informal approaches midwives take to adapt health communication to the needs of their patients	Qualitative	Semi structured interviews and focus groups and observation	Autstralian study. Antenatal staff	Not discussed	21 staff members in total	8 interviews 2 focus groups 13 staff members were observed	Not discussed	Midwives do adapt their practices. Adaptations do not take into account the patient's health literacy.

Appendix 5 - Data summary table – Interventions during pregnancy pertaining to diet and physical activity. (Adapted from Greenhalgh 2014)

Authors/date	Title	Research Question/Aim	Pilot undertaken	Population	Study Design	Response rates and numbers	Findings/results.	Limitations	Strength
Haby et al. (2015)	Mighty Mums – An antenatal healthcare intervention can reduce gestational weight gain in pregnancy	To evaluate the effects of a behavioural intervention programme for women with BMI≥30kg/m², emphasising nutrition and physical activity	Yes	Purposive sampling. Women with BMI≥30kg/m². Controls matched for age, parity and BMI	Randomised trial. Intervention group was given and extra 60 minutes with a midwife. Physical activity was prescribed and a food discussion group offered. Control group received standard care	50 women in each group	Significantly less GWG in the intervention group and significantly lower BMI postnatally	Unclear which part of the intervention was most effective. (Counselling, walking poles or dietary advice)	High rates of participation. Only 65% of target population was invited to participate. The reasonas for this are not clear. ? due to midwives lack of confidence in mentioning the study.

Authors/date	Title	Aim of Study	Pilot	Population	Study Design	Sample size/response rates	Findings	Limits	Strengths
Jewell K et al. (2014)	The Healthy Eating and Lifestyle in pregnancy (HELP) feasibility study.	Exploration of group based weight management for obese pregnant women.	No	Any women who presented with BMI≥30kg/m² at the booking appointment (All midwivews were appropriately trained.	Weekly meetings conducted by a midwife and a Slimming World consultant to educate women with respect to diet and exercise	148 women attended. No controls	Promising results showing a reduced GWG overall and a higher prevalence in breastfeeding amongst those who attended. Qualitative data also collected	Small numbers and only a small qualitative sample	Data strengthened by including qualitative data collection. Found to be an acceptable intervention for women.

Authors/date	Title	Aim of Study	Pilot	Population	Study Design	Sample size/population	Findings	Limits	Strengths
McGiveron A et al. (2014)	Limiting antenatal weight gain improves maternal health outcomes in severely obese pregnant women: finding of a pragmatic evaluation of a midwife led intervention	To evaluate a programme of health education aimed at women who presented with raised BMI greater than 35kg/m	**no**	Any woman with BMI≥35kg/m² was invited to attend when they presented for their first scan	Advice was delivered by a specialist healthy lifestyle midwife and 3 healthy lifestyle advisors. All trained in delivering behaviour change advice. Comparative study	89 women in intervention group and 89 in non-intervention group.	A significantly less GWG was seen in the intervention group. Reduction in PPH.	Not an RCT and so the women who chose to participate may have been more motivated to change behaviours than those in the non-intervention group.	
McParlin et al. (2017)	What helps or hinders midwives to implement physical activity guidelines for obese pregnant women? A questionnaire survey using the Theoretical Domains framework.	To investigate barriers and facilitators to physical activity guideline implementation for midwives when advising obese pregnant women.	No but developed with the consideration of domains required for practice	Midwives practicing in North East England	Email invites	365 sent out, 192 (52.6%) included in analysis	Midwives accepted that this area of practice was part of their role. They felt they lacked skills and resources to approach this effectively.		Large number of respondents

Authors/date	Title	Aim of Study	Pilot	Population	Study Design	Sample size/population	Findings	Limits	Strengths

Ronnberg et al. (2014)	Intervention during pregnancy to reduce excessive gestational weight gain – a randomised controlled trial	To evaluate if a low cost intervention could decrease the percentage of women gaining weight above the Institute of Medicine recommendations on GWG compared with standard care.	No	Pregnant women who were over 18 years of age and had a BMI>19kg/m²	RCT. Intervention group were given a written prescription of physical activity (renewed at every visit v standard care)	445 women randomised. 221 in the intervention group. 224 in the non-intervention group	GWG was reduced overall. Not a significant reduction in women who exceeded the IOM recommendation	Raised BMI was not the focus of this study	Large sample size.

Appendix 6 – Opinions of Women – Data extraction table (Adapted by Greenhalgh 2014)

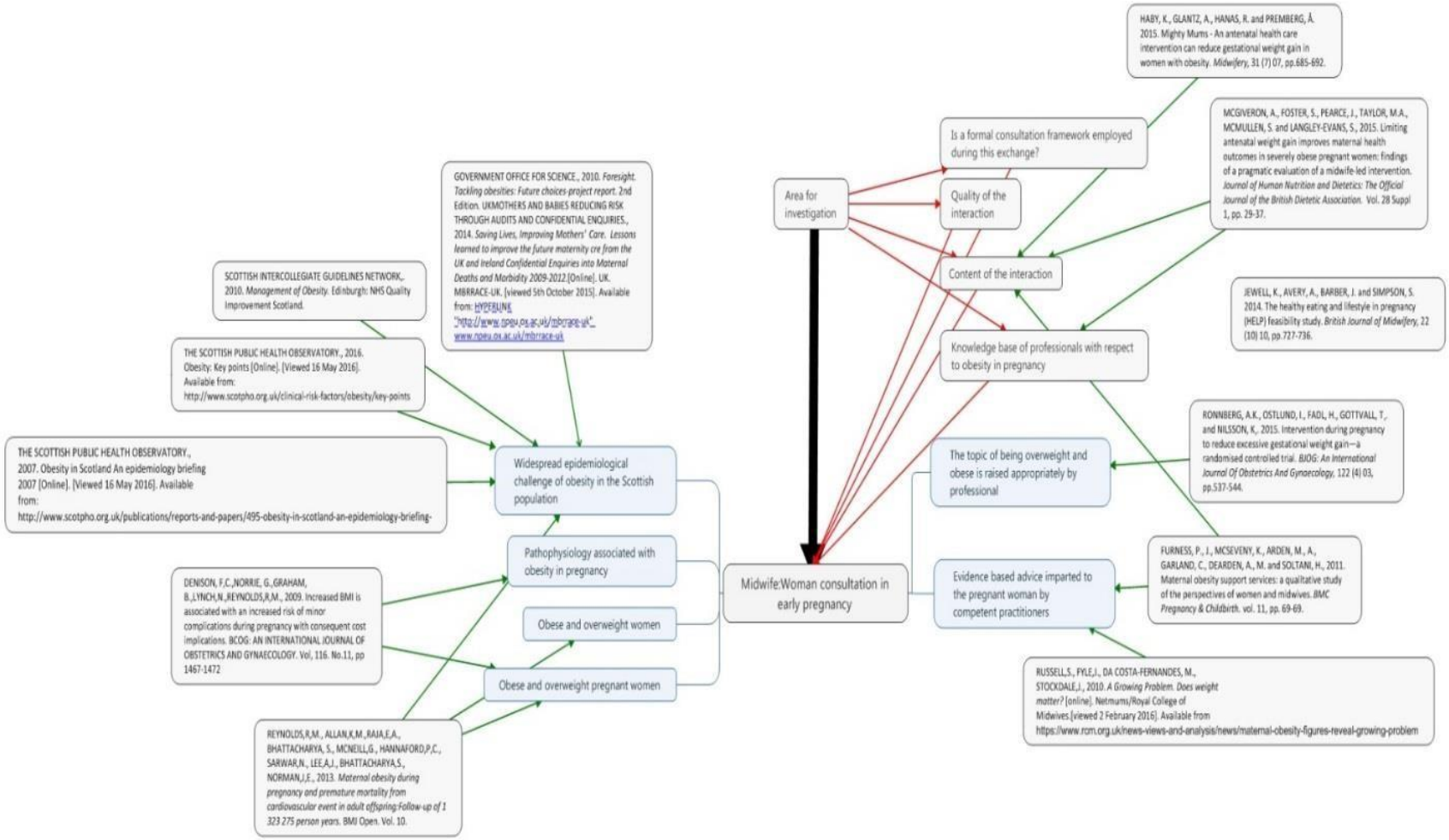
Authors/date	Title	Research Question/Aim	Pilot undertaken	Population	Study Design	Response rates and numbers	Findings/results.	Limitations	Strength
Furness et al. (2011)	Maternal obesity support services: a qualitative study of the perspectives of women and midwives	To explore the experiences of women and midwives regarding existing support for weight management in pregnancy and their ideas for service development.	Not applicable.	Purposive sampling of midwives. No=7 Women were invited and then self selecting. No=6	Focus groups		Limited advice for women. Conflicting advice via the general media. Suggests that there are unspoken anxieties surrounding obesity on the part of the woman and the midwives. Women were aware that excessive weight wasn't healthy. Specialist clinic was welcomed.	Very small numbers. Self selecting group so some population bias may be at play.	Demonstrates that women who attended a specialist clinic appreciated the clear, honest information given and the additional dietetic input.

Authors/date	Title	Research Question/Aim	Pilot undertaken	Population	Study Design	Response rates and numbers	Findings/results.	Limitations	Strength
Lucas et al. (2014)	Nutrition advice during pregnancy:Do women receive it and can health care professionals provide it? (Literature review)	Literature review. 31 papers. To identify sources of information that women received with respect to nutritional advice.	n/a	Papers that explored advice giving to pregnant women. One paper was ethnicity specific	Lit review		Majority of studies were of low quality. Nutritional advice at 12 weeks gestation is too late Professionals had a low level of knowledge about nutritional issues. Lack of training was highlighted by professionals. Women appeared to trust the information that was given by healthcare professionals.	Some papers may have been missed. A single reviewer carried out this review. Pre-pregnancy advice was not included. Different population groups/	
McGivernon et al. (2014)	Limiting antenatal weight gain improves maternal health outcomes in severly obese women: Findings of a pragmatic evealuation of a midwife led intervention	Service evaluation to establish whether one-to-one guidance and health education for obese pregnant women is effective.	No	Women with BMI≥35kg/m²	Non RECT but comparison group was used. Participants identified at dating scan. One-to-one session with lifestyle midwife. Behaviour change intervention	92 and 89 in each group respectively	Statistical analysis. Weigh gain in the intervention group was lower. 76.4% reduction seen in pregnancy compications. There wer higher breastfeeding rates in the intervention groups.	Self selecting population	

Authors/date	Title	Research Question/Aim	Pilot undertaken	Population	Study Design	Response rates and numbers	Findings/results.	Limitations	Strength
Lutsive et al. (2012)	Little congruence between healthcare provider and patient perceptions of counselling on GWG	To determine self reported counselling practices of professionals with regard to appropriate weight gain in pregnancy	Yes	All healthcare professionals who advise pregnant women.	Self administered questionnaires	6 obstetricians 14 family physicians (GPs) 15 midwives 7 other	Professionals believe they impart appropriate information but women believe that they are not given this information.	A very specific was used for recruitment.Limitations Regarding generalisability.	Wider range of topics were included in the questionnaire
Porteous et al. (2014)	Informing maternity service development by surveying new mothers about preferences for nutrition education during their pregnancy in an area of social disadvantage	A known link exists between maternal nutrition and pregnancy outcomes. Study devised to inform what the needs of socially deprived women are.	Yes	Postnatal women from a deprived background	Self administered questionnaires	309 questionnaires Issued yielding a 55% response rate.	Those with BMI 30-34.9kg/m² may be at risk of gaining the most weight. Reponses suggest that women have a poor quality diet.Those with BMI>30kg/m² did not value the importance of returning to a pre-pregnancy weight. Women were receptive to receiving nutritional advice in community settings.	Population bias. Only English speakers and those from deprived areas were included in the study.	Other facilities adjusted their practices to align with the interventions in this study and had positive outcomes.

Authors/date	Title	Research Question/Aim	Pilot undertaken	Population	Study Design	Response rates and numbers	Findings/results.	Limitations	Strength
Russell et al. (2010)	A growing problem: Does weight matter?	To explore how women view themselves and their feelings about weight during pregnancy	No	Any woman who had given birght	Online survey via a parenting website	6252 women completed the questionnaire	Midwives are not providing nutritional advice despite women stating they would be receptive to this information. Women in all BMI categories may be concerned about their weight. 64% of women who responded felt that this advice would have been useful.	Self selecting sample. So some population bias may have been at play. Relies on women being computer literate	A large sample group.. Undertaken in conjunction with a lay group and this may have attracted som women to complete the questionnaire.

Appendix 7 – Mindmap illustrating contextual situation of midwives



Appendix 8 – Ethical Approval Letters

University Hospitals Division
Queen's Medical Research Institute
47 Little France Crescent, Edinburgh, EH16 4TJ

NHS Lothian

FM/CF/approval

6 December 2017

Mrs Yvonne Greig
St John's Hospital
Howden Road West
Livingston
EH54 6PP

Research & Development
Room El.16
Tel: 0131 242 3330

Email:
accord@nhslothian.scot.nhs.uk

Director: Professor Tim Walsh

Dear Mrs Greig

Lothian	Project No: 2017/0316	REC No: N/A

Title of Research: A phenomenological study to explore the professional practices and perceptions of midwives who raise the topic ofbeing overweight or obese with pregnant women who present for care in pregnancy.

Participant Information Sheet:	Consent Form:
Version 1.0, dated 8 May 2017	Version 1.0, dated 8 May 2017

Protocol: Version 1.0, dated 8 May 2017

I am pleased to inform you this letter provides Site Specific approval for NHS Lothian for the above study and you may proceed with your research, subject to the conditions below.

Please note that the NHS Lothian R&D Office must be informed of any changes to the study such as amendments to the protocol, funding, recruitment, personnel or resource input required of NHS Lothian.

Substantial amendments to the protocol wilt require approval from the ethics committee which approved your study and the MHRA where applicable.

Please keep this office informed of the following study information, which is a condition of NHS Lothian R&D Management Approval:

1. Date you are ready to begin recruitment, date of the recruitment of the first participant and the monthly recruitment figures thereafter.
2. Date the final participant is recruited and the final recruitment figures.
3. Date your study / trial is completed within NHS Lothian.

I wish you every success with your study.
Yours sincerely

Fiona McArdle

Ms Fiona McArdle
Deputy R&D Director

CC: Dr Edward Doyle, Associate Divisional Medical Director, RHSC

STA034

For completion by
The Head of Division/Subject Area/Group, OR
Division/Subject Area/Group Research Ethics Committee:

Either

I refer this application back to the applicant for the following reason(s):

Name (if you have an electronic signature please include it here)

_____(Head of Division/ Subject Area/ Group)

Date_____

Please return the form to the applicant.

Or

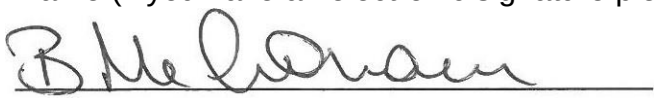
Please tick one of the alternatives below:

I refer this application to the QMU Research Ethics Panel.

I find this application acceptable and an application for Ethical Approval should now be submitted to a relevant external committee.

I grant Ethical Approval for this research.

Name (if you have an electronic signature please include it here)



Date 17.10.17 (Head of Division/ Subject Area/ Group)

Please email one copy of this form to the applicant and one copy to the Secretary to the Research Ethics Panel (ResearchEthics@qmu.ac.uk).

Appendix 9 – Safety Protocol

Advice giving by midwives to obese pregnant women

Protocol for Incident Intervention and Reporting

When interviewing midwives and exploring their clinical practice, If the chief investigator uncovers/discovers that midwives are imparting non-evidence based advice with respect to weight management, diet and physical activity and believes that a woman or her unborn baby many be at risk form harm if this advice is followed she has responsibilities under the NMC codes of conduct (http://www.nmc.org.uk/standards/code/read-the-code-online/) to take action.

Intervention

On completion of the interview the chief investigator will raise with the midwife any issues with respect to non-evidence based advice that may have been given to women and highlight why it may be unsafe. The Chief Investigator will:-

- Raise the issues with the individual midwife and give rationale why advice may be unsafe.
- Direct the midwife to where the current evidence lies within the literature in order that further personal learning can be achieved. (Appropriate literature references will be given to the individual)
- Advise the midwife to update his/her knowledge in order that further advice is given in light of evidence.
- If, during the course of the interviews it comes to light that non-evidence based advice has been given to women then the midwife will be asked to ensure that women are given the corrected advice at the next antenatal appointment.

Any incidents uncovered will be reported to the Midwifery Manager for Community Services as soon as possible.

Reporting

If the giving of non-evidence based advice is uncovered during the course of this research, a detailed account of it will be discussed with academic supervisors and if deemed appropriate will be escalated to the clinical midwifery managers. See Appendix xx – Flow chart of incident reporting.

Appendix 10 - Research Participant Information Sheet

What does it mean for midwives to raise the topic of being overweight or obese with women who present for antenatal care and how do they understand their professional practice with respect to this topic?

You are being invited to take part in a research study. Before you decide it is important that you understand why this is being undertaken and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. If you are unsure about anything or require greater clarification then please ask us for more details regarding the study. Please take time to decide if you wish to take part in this research. If you do decide to participate you will be given a copy of this information sheet and a signed copy of your consent form to keep for your own records.

Background to the research.

Being overweight or obese carries risks for pregnant women and their babies during pregnancy, labour and birth and also carries health risks for the child's ongoing health. Midwives are ideally placed to provide evidence based information to empower women to modify these risks and to optimise their health during pregnancy.

What is the purpose of this study?

The aim of this research is to explore how midwives utilise their opportunities to inform pregnant women about the risks of being overweight or obese during their antenatal appointments and to explore what raising this topic with women means for midwives. It is hoped that this will inform future midwifery education and practice with respect to providing appropriate information to women who are overweight or obese.

Why have I been invited to take part in this study?

As a community midwife you are the first and key professional that pregnant women meet on their journey to becoming a mother and are therefore ideally placed to give a narrative about your professional practice when providing care to women who are either overweight or obese.

Do I have to take part in this study?

It is up to you to decide whether or not you wish to take part in this study. If you do decide to take part you will be given a copy of this information sheet to keep and you will be asked to sign a consent form. If you do decide to take part you will still be able to withdraw from the study at any time and you do not need to give a reason for your withdrawal. Should you choose to withdraw, we will discuss with you whether we may still use any data you may already have given us.

How will the research/data collection be carried out?

If you decide to take part you will be asked to participate in an interview to discuss your clinical experiences with respect to delivering care and providing information for women who are either overweight or obese during antenatal consultations. This interview will be audio recorded but if you are uncomfortable with this then notes may be taken instead, similarly, if you wish parts of the interview to NOT be recorded this can be arranged. This interview will be arranged at a time and place that is convenient for you. It is anticipated that interviews will be carried out on NHS properties, probably your place of work in order to reduce inconvenience for you. The length of time of the interview will depend on what you tell us but we expect that it will last no longer than an hour. Occasionally we may want to call an individual following the interview to clarify any points raised by either the participant or the researcher. At the end of the interview you will be asked if this will be acceptable to you.

In order to strengthen the data gathered during interviews we also ask that you complete a short reflective diary demonstrating how you have practiced when raising the topic of being overweight or obese with pregnant women. We ask that you reflect upon three separate cases. On its completion the diary will be personally collected by the researcher to ensure it is not lost or damaged in the post.

What are the possible disadvantages of taking part in this research?

We consider that there are minimal disadvantages of taking part in this study. The main disadvantage is the time taken to complete the interview and the reflective diary. It is also possible, although unlikely, that the interview will raise issues that you find difficult to talk about. If this occurs, you will be free to stop the interview at any point. You will not be asked to continue either that line of questioning or the interview unless you want to.

What are the possible benefits of taking part in this research?

Taking part in this research will not directly benefit you. It is anticipated that the findings will inform future midwifery practice and also any professional educational needs. In the long term it is anticipated that women will benefit from being provided with accurate, evidence based information to allow them to make good lifestyle choices and so reduce risk of complications of being overweight or obese arising during their pregnancies, labour and birth. This will also reduce the risk of childhood obesity and it is hoped begin to break the generational cycle of obesity.

Will my identity remain confidential should I agree to take part in this research?

Any information which is collected about and from you during the course of the research will be treated with the strictest of confidence. Audio recordings and written transcripts will be given a numerical code to ensure that you cannot be identified from them and these will be kept securely in locked premises (Queen Margaret University, Edinburgh). Electronic copies/information will be kept on a password protected computer on university premises. This numerical code and audio recordings will be destroyed at the end of the study.

What will happen to the results of this research?

When the data from the interviews and the reflective diaries has been collected and analysed you will be informed and a document containing the general findings will be made available to you on request. It is

anticipated that the findings will be disseminated at local, national and international conferences and meetings. You will be invited to any local presentations and informed of any relevant publications. Academic papers will be published in peer reviewed professional journals.

Who is organising this research?

This study is being undertaken as part of a Professional Doctorate education programme by the Yvonne Greig (Midwife) who is studying at Queen Margaret University, Edinburgh. The programme is being funded by the researcher and the General Nursing Council.

Has the study been reviewed?

This study has been approved by the Queen Margaret University ethics committee and by the NHS Research and Development Department.

Contact Details

Yvonne Greig (Professional Doctorate Student). ygreig@qmu.ac.uk Tel 07746361516

Dr Margaret Smith (Academic Supervisor) msmith1@qmu.ac.uk Tel 0131 474 4264

Dr Anne Williams (Academic Supervisor) Awilliams@qmu.ac.uk Tel 0131 474 0000

Dr Lindesay Irvine (Professional Doctorate Course Leader) Lirvine@qmu.ac.uk

Tel 0131 474 0000

Appendix 11 - Consent Form and Particpant Information Leaflet

How do midwives raise the topic of being overweight or obese with pregnant women and what meanings to they attach to their practice within this context during antenatal consultations?

Study Number

1. I confirm that I have read and understand the participant information leaflet with respect to the above study and have had the opportunity to consider the information, ask questions of the researcher(s) and have had these satisfactorily answered.
2. I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason.
3. I understand and agree to the interview being audio recorded either in full or in part and that I may be contacted at a later date to clarify any points made during the interview
4. I agree to complete a practice diary with respect to providing reflective information as to how I provide information for pregnant women who may be overweight or obese.
5. I understand that small sections of my interview (quotes) and my practice diary may be used in published writing about the study, and that I will not be identified at any time
6. I understand that information I give during the interview will remain confidential.
7. I agree to take part in the above study.

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Name of participant	Date	Signature
---	---	---
Name of researcher taking consent	Date	Signature

Appendix 12 - Indicative Topic Guide for Use during Interviews

Broad Category

Professional experience

- Length of time practicing
- Areas of clinical expertise
- Geographical areas of practice

Awareness of practice raising issues pertaining to public health.

- Perception of the public health role of the midwife.
- Previous education/training with respect to being overweight or obese in pregnancy.
- Perceived barriers and influencing factors in raising sensitive topics with women.

Perceptions of own practice

- Educational provision with respect to consultation.
- Educational provision with respect to the risks of living with obesity.
- Educational provision with respect to providing nutritional advice and advice about physical activity.

Knowledge Base with respect to Obesity in Pregnancy

- Baseline knowledge of the risks to the pregnancy.
- Previous education/training and practice with respect to delivering care to overweight and obese women.
- Perceived level of importance that should be given to this issue.
- Knowledge of supplementary professional groups who can complement maternity care.

Personal Issues.

- Physical appearance
- Previous experience either personally or professionally.
- Positive or sub optimal experiences with overweight or obese women.

Appendix 13 – Interview schedule

What does it mean for midwives to raise the topic of being overweight or obese with women who present for antenatal care and how do they understand their professional practice with respect to this topic?

Introduction

- Introduce self and the study.
- Ensure happy with interview being recorded.
- Reassurance regarding confidentiality.
- Ensure comfort.
- Allow for questions prior to starting.

General Introductory Questions	Probes
Can you tell me a bit about your midwifery career and experience so far?	General questions around years qualified, length of time practicing in community, practiced in other geographical areas.
Approaching the Antenatal Appointment	**Probes**
How do you prepare for a booking appointment when meeting a woman early in her pregnancy? Tell me a bit about the midwife-woman relationship you hope to build.	Tell me what topics are always included during appointments? Are there ever any concerns about raising some of these? What are they? Is obtaining details about the woman prior to her arrival a priority? Can you explain why? Tell me what you hope to achieve as a result of this woman/midwife relationship
Tell me a bit about how you've developed your communication skills? Tell me how you gauge the effectiveness of your communication skills.	Tell me a bit about your knowledge surrounding consultation? Can you tell me a little more about them? Can you tell me a bit more about the education you received surrounding communication and consultation? Tell me about your own professional interests and how you maintain your proficiency.
Raising Sensitive Topics	**Probes**
Tell me a little bit about your public health role and how you incorporate it into daily practice.	How important is this aspect of antenatal care to you as a professional? Tell me how you would raise some of the so called sensitive issues? Can you give examples?

	Tell me a little bit about what props (if any) you might use.
Do you experience any internal emotions when you attempt to raise lifestyle issues? If so, can you explain a little more? What 'sensitive topics' if any do you confident in raising with women? Can you explain where/how you learned about these issues?	Smoking, domestic violence? Define your interpretation of 'sensitive topics' for me? Why is that?
Tell me if you are ever aware of avoiding or omitting any public health/sensitive issues. If you do can you explain why? Tell me a bit about how your emotions when you either raised or omitted a topic.	Do you find anything challenging about raising some topics over others? Were there any personal reasons for either including or omitting them?
Tell me a bit about what you know of the risks of being overweight or obese in pregnancy.	Do you have any concerns for women in your care who are either overweight or obese? How did you acquire this knowledge?
Tell me about any strategies that you may have developed when raising sensitive topics?	How do you frame the discussion in conversation? What resources, if any do you have on hand to support your practice? Have you engaged in any prior learning about specific topics?
Tell me what challenges exist (if any) for you about raising the topic of obesity with women. Tell me a bit about why you would or would not raise the issue with women?	Personal experience, discussion with colleagues, ongoing services for women, organisational rules/protocols?
Knowledge base with respect to being overweight or obese in pregnancy.	**Probes**
How important a topic do you think obesity is to raise with women?	Can you expand a little and tell me why you are thinking this way? Tell me what other professionals you might liaise with when supporting obese pregnant women.

Tell me about your confidence levels when raising the topic of obesity with women? What are your professional concerns about raising this topic with women?	Tell me a bit more about that, what enhances or reduces your confidence? What repercussions if any might you be aware of occurring after you've raised this topic?
If you had to change something about the current community midwife remit to improve the service, what might it be?	Do you have any logistical ideas? Would you change working practices in any way? Tell me about any other professionals groups you think could enhance practice? What about educational resources?

Conclusion

- I've reached the end of my questions. Is there anything else that you would like to say or add?
- Is there anything you'd like to add?
- Thank you for your time.

Appendix 14 – Practice Diary

What does it mean for midwives to raise the topic of being overweight or obese with women who present for antenatal care and how do they understand their professional practice with respect to this topic?

PRACTICE DIARY

Thank you for agreeing to take part in this research. In addition to the interview that has been undertaken we ask that you also take time to complete this short diary in order that we can explore what it means for you to discuss being overweight or obese with the women in your care.

Please consider each question carefully and answer as explicitly as you can. It would be useful if you could reflect upon any consultation with women who are either overweight or obese fairly soon after the episode of care so that key points are still fresh in your mind. We ask that you reflect upon three different cases where women who have been overweight or obese have presented for antenatal care.

This diary will be personally collected by the researcher when we meet to explore the responses you have given.

Study Number

Case 1.

1. Prior to the woman arriving did you have any idea whether she had raised BMI or not? If you did can you explain how that was known (GP letter, previously cared for this woman).

2. In your own words please describe how you felt when you calculated the BMI and realised it placed the woman in the overweight or obese category according to the World Health Organisation of being overweight or obese (BMI≥25kg/m²) or (BMI≥30kg/m²) respectively.

3. What was it about this woman that influenced or inhibited you from discussing being overweight or obese during pregnancy?

4. If you were to repeat this consultation would you do anything differently?

Case 2.

1. Prior to the woman arriving did you have any idea whether she had raised BMI or not? If you did can you explain how that was known (GP letter, previously cared for this woman).

2. 2. In your own words please describe how you felt when you calculated the BMI and realised it placed the woman in the overweight or obese category according to the World Health Organisation of being overweight or obese (BMI≥25kg/m²) or (BMI≥30kg/m²) respectively.

3. What was it about this woman that influenced or inhibited you from discussing being overweight or obese during pregnancy?

4. If you were to repeat this consultation would you do anything differently?

Case3.

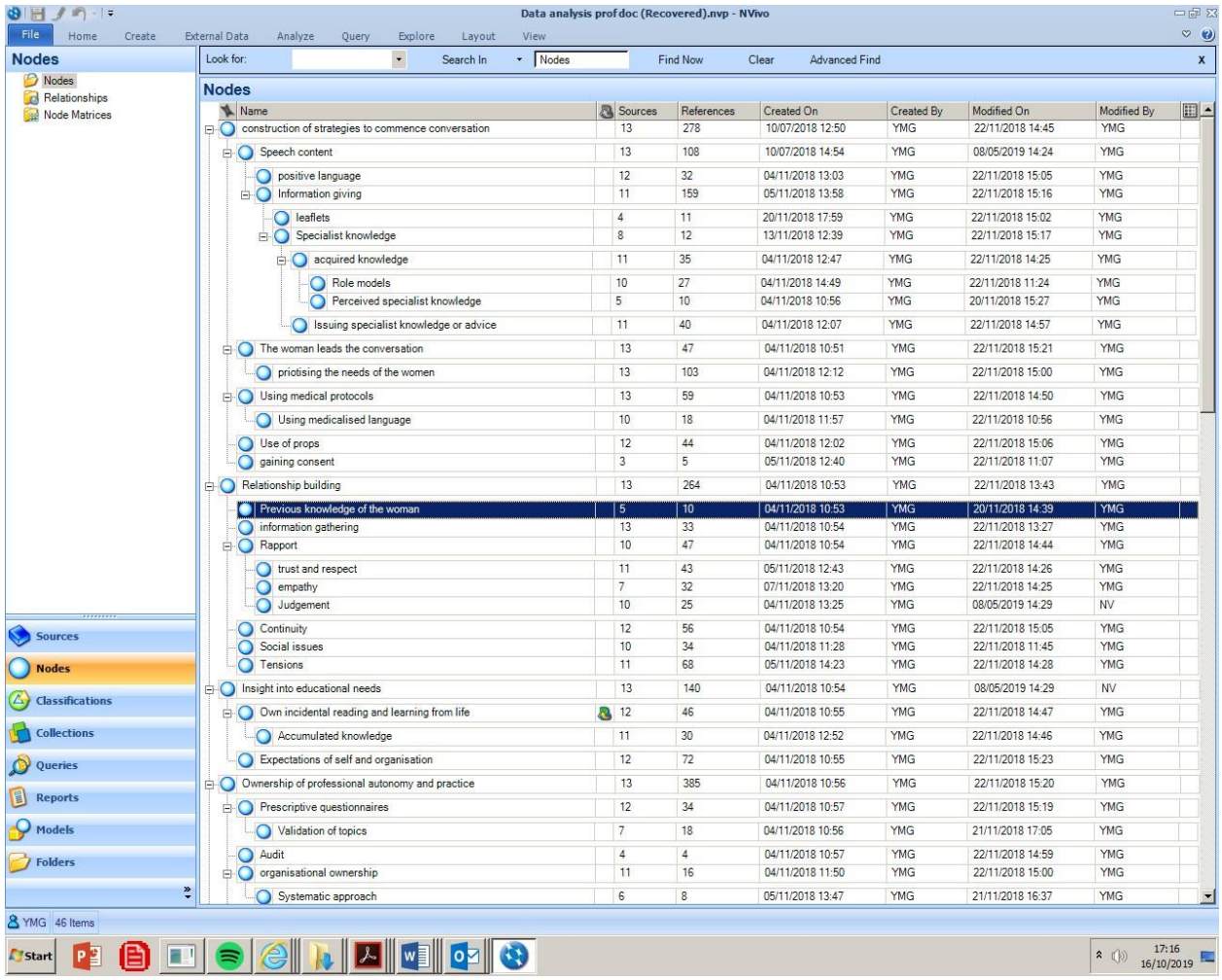
1. Prior to the woman arriving did you have any idea whether she had raised BMI or not? If you did can you explain how that was known (GP letter, previously cared for this woman).

2. 2. In your own words please describe how you felt when you calculated the BMI and realised it placed the woman in the overweight or obese category according to the World Health Organisation of being overweight or obese (BMI≥25kg/m²) or (BMI≥30kg/m²) respectively.

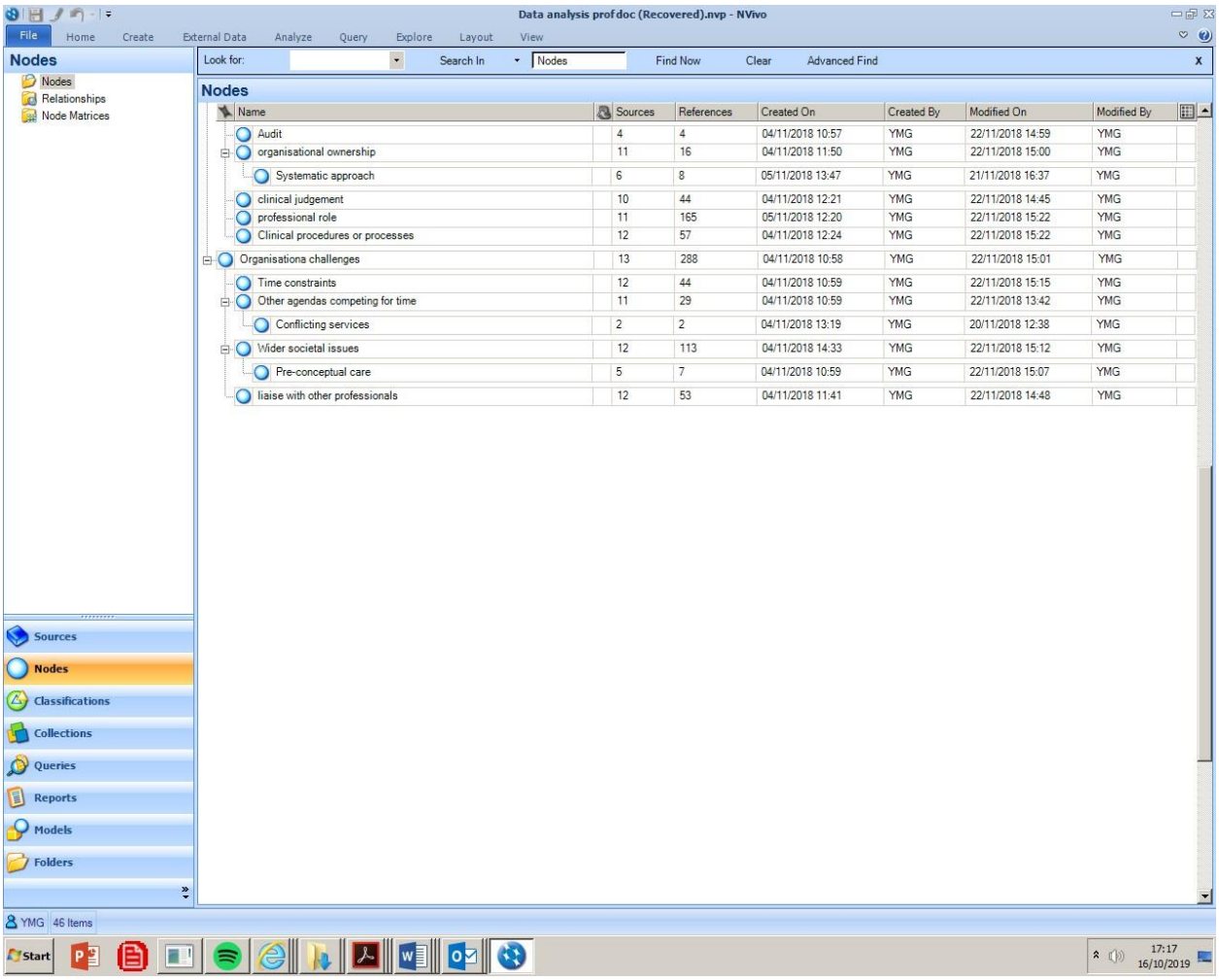
3. What was it about this woman that influenced or inhibited you from discussing being overweight or obese during pregnancy?

4. If you were to repeat this consultation would you do anything differently?

Appendix 15 – Nodes or themes that emerged from the data



Name	Sources	References	Created On	Created By	Modified On	Modified By
construction of strategies to commence conversation	13	278	10/07/2018 12:50	YMG	22/11/2018 14:45	YMG
Speech content	13	108	10/07/2018 14:54	YMG	08/05/2019 14:24	YMG
positive language	12	32	04/11/2018 13:03	YMG	22/11/2018 15:05	YMG
Information giving	11	159	05/11/2018 13:58	YMG	22/11/2018 15:16	YMG
leaflets	4	11	20/11/2018 17:59	YMG	22/11/2018 15:02	YMG
Specialist knowledge	8	12	13/11/2018 12:39	YMG	22/11/2018 15:17	YMG
acquired knowledge	11	35	04/11/2018 12:47	YMG	22/11/2018 14:25	YMG
Role models	10	27	04/11/2018 14:49	YMG	22/11/2018 11:24	YMG
Perceived specialist knowledge	5	10	04/11/2018 10:56	YMG	20/11/2018 15:27	YMG
Issuing specialist knowledge or advice	11	40	04/11/2018 12:07	YMG	22/11/2018 14:57	YMG
The woman leads the conversation	13	47	04/11/2018 10:51	YMG	22/11/2018 15:21	YMG
prioritising the needs of the women	13	103	04/11/2018 12:12	YMG	22/11/2018 15:00	YMG
Using medical protocols	13	59	04/11/2018 10:53	YMG	22/11/2018 14:50	YMG
Using medicalised language	10	18	04/11/2018 11:57	YMG	22/11/2018 10:56	YMG
Use of props	12	44	04/11/2018 12:02	YMG	22/11/2018 15:06	YMG
gaining consent	3	5	05/11/2018 12:40	YMG	22/11/2018 11:07	YMG
Relationship building	13	264	04/11/2018 10:53	YMG	22/11/2018 13:43	YMG
Previous knowledge of the woman	5	10	04/11/2018 10:53	YMG	20/11/2018 14:39	YMG
information gathering	13	33	04/11/2018 10:54	YMG	22/11/2018 13:27	YMG
Rapport	10	47	04/11/2018 10:54	YMG	22/11/2018 14:44	YMG
trust and respect	11	43	05/11/2018 12:43	YMG	22/11/2018 14:26	YMG
empathy	7	32	07/11/2018 13:20	YMG	22/11/2018 14:25	YMG
Judgement	10	25	04/11/2018 13:25	YMG	08/05/2019 14:29	NV
Continuity	12	56	04/11/2018 10:54	YMG	22/11/2018 15:05	YMG
Social issues	10	34	04/11/2018 11:28	YMG	22/11/2018 11:45	YMG
Tensions	11	68	05/11/2018 14:23	YMG	22/11/2018 14:28	YMG
Insight into educational needs	13	140	04/11/2018 10:54	YMG	08/05/2019 14:29	NV
Own incidental reading and learning from life	12	46	04/11/2018 10:55	YMG	22/11/2018 14:47	YMG
Accumulated knowledge	11	30	04/11/2018 12:52	YMG	22/11/2018 14:46	YMG
Expectations of self and organisation	12	72	04/11/2018 10:55	YMG	22/11/2018 15:23	YMG
Ownership of professional autonomy and practice	13	385	04/11/2018 10:56	YMG	22/11/2018 15:20	YMG
Prescriptive questionnaires	12	34	04/11/2018 10:57	YMG	22/11/2018 15:19	YMG
Validation of topics	7	18	04/11/2018 10:56	YMG	21/11/2018 17:05	YMG
Audit	4	4	04/11/2018 10:57	YMG	22/11/2018 14:59	YMG
organisational ownership	11	16	04/11/2018 11:50	YMG	22/11/2018 15:00	YMG
Systematic approach	6	8	05/11/2018 13:47	YMG	21/11/2018 16:37	YMG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Systematic approach 6 8 05/11/2018 13:47 YMG 21/11/2018 16:37 YMG
clinical judgement 10 44 04/11/2018 12:21 YMG 22/11/2018 14:45 YMG
professional role 11 165 05/11/2018 12:20 YMG 22/11/2018 15:22 YMG
Clinical procedures or processes 12 57 04/11/2018 12:24 YMG 22/11/2018 15:22 YMG
Organisationa challenges 13 288 04/11/2018 10:58 YMG 22/11/2018 15:01 YMG
Time constraints 12 44 04/11/2018 10:59 YMG 22/11/2018 15:15 YMG
Other agendas competing for time 11 29 04/11/2018 10:59 YMG 22/11/2018 13:42 YMG
Conflicting services 2 2 04/11/2018 13:19 YMG 20/11/2018 12:38 YMG
Wider societal issues 12 113 04/11/2018 14:33 YMG 22/11/2018 15:12 YMG
Pre-conceptual care 5 7 04/11/2018 10:59 YMG 22/11/2018 15:07 YMG
liaise with other professionals 12 53 04/11/2018 11:41 YMG 22/11/2018 14:48 YMG
Sources
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Classifications
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Queries
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16/10/2019

Appendix 16 -Local Protocol for providing care to women with BMI≥30kg/m²

This section to be completed by document control.
Maternity Guidelines Page 1 of 9 Date created:
29.09.16 Version: V1 Author1 : Review date: 29.09.19
Document ID:
[redacted]

Obesity Management during Pregnancy
[redacted]

1. INTRODUCTION
Obesity is becoming increasingly prevalent in the UK population. Obesity is classified as obese class I (BMI ≥30kg/m_2), obese class II (BMI≥35 kg/m_2) and obese class III (BMI≥40 kg/m_2)[1]. Pregnant women who are obese are at greater risk of a variety of pregnancy related complications compared to women of normal weight including preeclampsia, gestational diabetes and caesarean section (see Appendix 1). In addition, management of an obese pregnant woman can be challenging due to problems including difficulty in assessing fetal size and presentation, fetal heart tracing and breastfeeding (see Appendix 1). Many groups are now recognising that pregnant women who are obese need additional specialist support during pregnancy to enable them to achieve a successful outcome[2]. Additionally, the confidential enquiry on maternal and child health (CEMACH 2003-2005) highlighted the excessive number of deaths amongst obese pregnant women, and recommended that women with a BMI ≥30 kg/m_2 should be seen for prepregnancy counselling in view of their additional risks[3]. The most recent review into maternal deaths by MBRRACE-UK in December 2015 reported that 30% of women who died were obese and 22% were overweight[4].

2. AIM
The aim of this guideline is to provide guidance for the antenatal, intrapartum and postnatal management of pregnant women with class II obesity (BMI≥35 kg/m_2) and class III (BMI≥40 kg/m_2). Women with a BMI≥30 kg/m_2 are also at higher risk of complications than women with a normal BMI, especially when co-morbidities exist. Consideration should be given to applying the same principles described in this guideline to women (particularly those with co-morbidities) depending on individual need. If a woman has a BMI 30-34 but no other concerns this guideline is unlikely to be needed.

3. GUIDELINES
· The recommended guidelines for antenatal, intrapartum and postpartum care for all women with a BMI≥35kg/m_2 are provided below· Women with a BMI>40 kg/m_2 require additional antenatal care over and above the recommendations for women with a BMI≥35 kg/m_2 which still apply. These additional recommendations are also outlined below.

4.0 RECOMMENDATIONS FOR ANTENATAL CARE
4.1 WOMEN WITH A BMI ≥35 KG/M_2 · *Booking appointment*
o Document height, weight and **BMI**.
o Folic acid 5mg
o Referral for consideration of ***consultant led care*** o HbA1C or fasting blood glucose at booking and OGTT at 26 weeks *(refer to NHS Lothian Diabetes and Pregnancy guideline)*
o Document ***full plan of care*** in special features in TRAK o Give anaesthetic information leaflet and put BMI>35 in TRAK o Advise ***weight maintenance*** and ***not weight loss*** during pregnancy.
o Consider 75mg Aspirin (LDA) if meets criteria for pre-eclampsia prophylaxis as per local guidelines} o Inform women of the increased risk of complications associated with

maternal obesity including pre-eclampsia, gestational diabetes, intra-partum complications and postnatal wound infections. (APPENDIX 1)

· ***TED or GEC stockings*** throughout any period of immobilisation and/ or inpatient stay should be offered. Knee length stockings (class 2) are suitable for most women. However, thigh length (class 1) should be used in women in whom there are contraindications to low molecular weight heparin. Stockings may need to be ordered at this point (APPENDIX 3)

· ***Thromboprophylaxis*** with low-molecular weight Heparin (e.g., Dalteparin) throughout any period of immobilisation and/ or inpatient stay should be offered if no contraindication identified in accordance with the [redacted] guideline. (See Associated Documents- Thromboprophylaxis Guideline)
· Measure blood pressure with appropriate sized cuff. (APPENDIX 1, Table 3) · Perform USS to assess fetal presentation if in doubt at term.

4.2 WOMEN WITH A BMI > 40KG/M_2

· All women should be offered referral to ***metabolic antenatal clinic*** (MAC) for antenatal care and advised they will have the input and advice of a ***dietitian*** at the clinic (Appendix 2). If this is declined, she should be referred to her locality consultant and they can still be offered a single dietetic appointment at MAC.
· ***Consultant led care is recommended****.*
· ***Anaesthetic referral.***
· ***Regular growth scans*** at 28 and 34 weeks due to inaccurate measurement of symphysio-fundal height.
· Undertake a full ***manual handling assessment***. Consider referral for advice about appropriate beds, equipment and lifting in women ≥140kg (Appendix 2)
· A ***definitive delivery plan*** should be made by the consultant with special consideration given to the most high risk women with significant obesity related co-morbidity, previous complicated delivery, current fetal macrosomia confirmed by scan (AC > 95_{th} centile or EFW > 4.5kg at term) or a BMI>50kg/m_2. · Women with BMI > 50kg/m_2 should have an antenatal assessment of their abdominal pannus in left lateral and standing positions. If a large dependent pannus is identified then suprapannus incision should be discussed and documented. Caesarean section should be offered for obstetric indications.
· Discuss long acting ***contraception*** and complete postnatal contraception questionnaire on TRAK at 28 week visit, as this can be offered either intraoperatively or postpartum prior to discharge.
· ***CTG and liquor volume*** at 40+10 weeks and before induction of labour due to increased risk of late stillbirth.

5.0 RECOMMENDATIONS FOR INTRAPARTUM CARE

5.1 WOMEN WITH A BMI ≥35 KG/M_2

· ***The obstetric senior registrar and anaesthetist should be informed of admission***.
Consultant input should be sought at the discretion of the senior registrar.
Note: *These are in addition to the recommendations for* ***antenatal*** *care for women with a BMI ≥35kg/m_2 which also apply for women with a BMI>40kg/m_2*

· ***Admission CTG and continuous external fetal monitoring*** are recommended, and ***fetal scalp electrode*** may be required.
· Labour and delivery of primiparous women should be managed on labour ward.
· In labour, women can have oral rehydration and have regular ***oral ranitidine*** 150mg six hourly.
· Consider the wearing of TED or GEC ***stockings*** during labour and throughout any induction process. · Aim to induce labour on weekdays and avoid the weekends.

· ***Caesarean Section*** should be performed by a ***senior obstetrician*** with experienced assistant. o Thorough skin preparation is recommended to reduce wound infection.

o Skin incision should be either ***low transverse skin incision*** (4) or suprapannus. It should be remembered that obesity may distort normal anatomical landmarks and care should be taken not to buttonhole the pannus.

o Consider ***looped PDS*** for closure of the rectus sheath. Consider suturing the subcutaneous tissue space in women with more than 2cm of subcutaneous fat[8]. Interrupted non absorbable sutures (e.g. ***ethibond***) and ***staples*** for skin closure should be considered.

o Surgeon should document in operative note type of sutures used and timing for removal where appropriate

· ***Active management*** of the third stage is recommended, and prophylactic ***oxytocin infusion*** (40IU in 500ml normal saline, at 125ml/hr) should be started in the presence of a risk factor for postpartum haemorrhage (e.g. macrosomia, caesarean delivery, prolonged labour).

5.2 WOMEN WITH A BMI > 40KG/M_2

· Weight limit on beds is 180kg, so specialist equipment may need to be ordered in advance (APPENDIX 2).
· ***Consultant input*** is ***recommended*** in any women ***with a BMI≥40 kg/m_2*** and ***mandatory if BMI≥50 kg/m_2***.

· TED/ GEC ***stockings*** should be worn throughout the process of induction of labour and during spontaneous labour.

· ***Caesarean section***

o ***Looped PDS*** is recommended for closure of the rectus sheath and interrupted non absorbable sutures (e.g. ***ethibond***) and ***staples*** are recommended for skin closure. Suture the subcutaneous tissue space in women with more than 2cm of subcutaneous fat[8]

o Consider negative pressure wound dressing (PICO) if large dependent pannus

o Consultant obstetrician and anaesthetist should attend all caesarean sections of women with a BMI≥50 kg/m_2.

6.0 RECOMMENDATIONS FOR POSTPARTUM CARE

6.1 WOMEN WITH A BMI ≥35 KG/M_2

· ***Early mobilisation*** should be encouraged.
· Daily ***postnatal review*** by a senior obstetrician if operative delivery. ·
Wound care
Note: *These are in addition to the recommendations for* ***intrapartum*** *care for women with a BMI ≥35kg/m_2 which also apply for women with a BMI>40kg/m_2*

o Offer patient education on wound care and hand hygiene and provide patient information leaflet on discharge.
o Abdominal and perineal wounds should be inspected daily for signs of infection.
o Take microbiology swabs and start appropriate antibiotics early if infection suspected. o Referral to the ***tissue viability nurse*** should be made at an early stage if concerns about healing.

Thromboprophylaxis as per local guideline.

Breast feeding should be encouraged. Additional support may be required, and should be offered.
Contraception should be discussed. The combined hormonal contraceptive pill is not recommended as its use increases the inherent risk of thromboembolism.

Post-partum health promotion.

o The long term effects of obesity should be discussed and documented. o Women offered referral for support in weight loss to the community support network via primary care. o Offer postnatal referral to NHS Lothian weight management service at 3 months

Gestational Diabetes

o Women diagnosed with gestational diabetes can be referred to pre diabetes course due to their high risk of developing future Diabetes

6.2 WOMEN WITH A BMI > 40KG/M_2 ***Postnatal thromboprophylaxis (regardless of mode of delivery)***

o Graduated ***compression stockings*** are recommended for ***6 weeks postpartum*** o ***Dalteparin*** should be prescribed for ***10 days postpartum***, even once discharged (See APPENDIX 4 for doses). As per local guideline o

· ***Offer postnatal referral to NHS Lothian weight management service at 3 months***

7. ASSOCIATED DOCUMENTS:

Manual Handling Guidelines
Anaesthetic Guideline
Sepsis Guideline
Thromboprophylaxis Guideline
Adult antimicrobial guideline
Diabetes and Pregnancy guideline **8.**

REFERENCES:

1. World Health Organization (WHO) Technical Report Series 894: Obesity: Preventing and managing the global epidemic. WHO. 2000. Geneva.
2. Catalano, PM; Obstet Gynecol 2007; 109 (2 Pt 1): 419-33

Note: *These are in addition to the recommendations for* ***postpartum*** *care for women with a BMI ≥35kg/m_2 which also apply for women with a BMI>40kg/m_2*
(MSL-NewGuideTemp 23.04.09)

3. Confidential Enquiry into Maternal and Child Health "Saving Mothers' Lives 2003-2005", RCOG Press
4. Knight M, Tuffnell D, Kenyon S, Shakespeare J, Gray R, Kurinczuk JJ (Eds.) on behalf of MBRRACE UK. Saving Lives, Improving Mothers' Care - Surveillance of maternal deaths in the UK 2011-13 and lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2009-13.

Oxford: National Perinatal Epidemiology Unit, University of Oxford 2015

5. Wall et al, Obstet Gynecol, 2003: 102 (5 Pt 1) 952-956 6. Manjunath P,Bearden DT. Pharmacotherapy 2007; 1081-91 7. RCOG Green top Guideline No. 37a. RCOG Press.
8. CMACE/RCOG Joint guideline- Management of Women with Obesity in Pregnancy. RCOG Press. March 2010
9. NICE. Caesarean section. London: Royal College of Obstetricians and Gyanecologists, 2004.
10. SIGN 116- Management of Diabetes in Pregnancy, March 2010, and updated September 2013
11. NICE. Hypertension in Pregnancy: diagnosis and management. (Clinical guideline No.107)

APPENDIX 1 RISKS ASSOCIATED WITH MATERNAL OBESITY

Table 1: Increased risks associated with obesity in pregnancy (For review see 2)

Problem	**Risk**
Miscarriage	3 fold increase
Fetal abnormality	2 – 4 fold increase (spina bifida, heart defect, omphalocoele)
Iatrogenic preterm birth	1.5-2 fold increase
Pre-eclampsia	2 fold increase
Venous thromboembolism	3-4 fold increase

Gestational diabetes 4 fold increase
Caesarean section 2 fold increase
Induction of labour 2 fold increase
Post partum haemorrhage 1 – 2 fold increase
Infection 2-3 fold increase (wound, urinary tract, genital tract)
Stillbirth 1 – 5 fold increase
Maternal death increased

Table 2: Challenges in the obstetric management of the obese pregnant woman
Time in pregnancy Problem
Antenatal Difficulty visualising fetal anatomy on ultrasound
Difficulty with assessing fetal size and presentation
Intrapartum Difficulty in obtaining fetal heart tracing
Difficulty accessing epidural / spinal space
Difficulty with intubation if general anaesthesia needed
Operative delivery more difficult
Moving and handling issues
Difficulty performing effective bimanual compression
Postpartum Breast feeding may be more difficult
Throughout pregnancy Venepuncture may be more difficult
Standard equipment (eg blood pressure cuff) may be inappropriate
Comorbidities more common
Increased risk thromboembolism

Table 3: BP cuff sizes {Management of Women with Obesity in Pregnancy}
Standard 12 x 23 cm
Large 15 x 33 cm
Thigh 18 x 36 cm
If mid arm circumference is above 33cm a large or thigh cuff should be used {Blood pressure measurement in
pregnancy - Nathan - 2015 - The Obstetrician & Gynaecologist - Wiley Online Library}

APPENDIX 3 - CUSTOM TEDS
Knee length TEDs are as effective as thigh length. Stocking size measurement should be made around the calf at the widest point, and stocking length measurement should be made from behind the knee to the heel.
Tyco TEDS
Knee Length TEDs are available in the following sizes. If custom made TEDs are required two pairs should be ordered from Tyco Healthcare UK, Redruth, UK.
Calf Girth Leg Length Code Size
<31 cm ***Small*** <41cm **Regular** 7071 A-
≥41 cm **Extra Long** 7339 B-
31-38 cm ***Medium*** <43 cm **Regular** 7115 C-
≥43 cm **Extra Long** 7480 D-
38-45cm ***Large*** <46 cm **Regular** 7203 E-
≥46 cm **Extra Long** 7594 F-
45-51cm ***Extra Large*** <46 cm **Regular** 7604 G-
≥46 cm **Extra Long** 7802 H-
≥*51 cm* ***Requires***
Custom Made
Provide measurement - -
Provide measurement - -

APPENDIX 4- THROMBOPROPHYLAXIS {Thrombosis and Embolism during Pregnancy and the Puerperium, Reducing the Risk- Green-top Guideline No. 37a)}
Thromboprophylaxis should be prescribed throughout any period of immobilization or inpatient stay and in women with a BMI>40 kg/m_2 *for 7 days postnatally* ***regardless of mode of delivery****.*

Table 1: LMWH dosage

Weight(kg) Dose
91-130 7500 units Dalteparin once daily
131-170 10000 units Dalteparin once daily
>170 75 units/kg/day Dalteparin (discuss with haematology)

Table 2: Contraindications and caution to LWMH use

Known bleeding disorder (e.g. haemophilia, von Willebrand's disease or acquired coagulopathy)
Active antenatal or postnatal bleeding
Women considered at increased risk of bleeding (e.g. placental abnormalities)
Thrombocytopenia (platelet count < $75x10_9$/l
Acute stroke in previous 4 weeks (haemorrhagic or ischaemic)
Severe renal disease (eGFR < 30ml/minute/1.73m_2)
Severe liver disease (prothrombin time above normal range or varices)
Uncontrolled hypertension (BP systolic > 200mmHg and diastolic > 120mmHg)

APPENDIX 5- INFORMATION REQUIRED FOR DISCHARGE SUMMARY
Antenatal course:
Weight gain
Antenatal complications
Growth scans
GTT normal/abnormal
Pregnancy outcome
Live/stillbirth/NND
Birthweight
Mode of delivery
Intrapartum/post-partum complications
Post-natal thromboprophylaxis
Follow-up
Plans for contraception
Advice for subsequent pregnancy
Generic advice
Weight loss (*GP can refer to weight management clinic 3 months postnatally)* Diet
Exercise
High dose folic acid (5mg) peri-conceptually
Metabolic clinic referral
Specific advice
Tailored to pregnancy outcome

APPENDIX 6 - LOW DOSE ASPIRIN

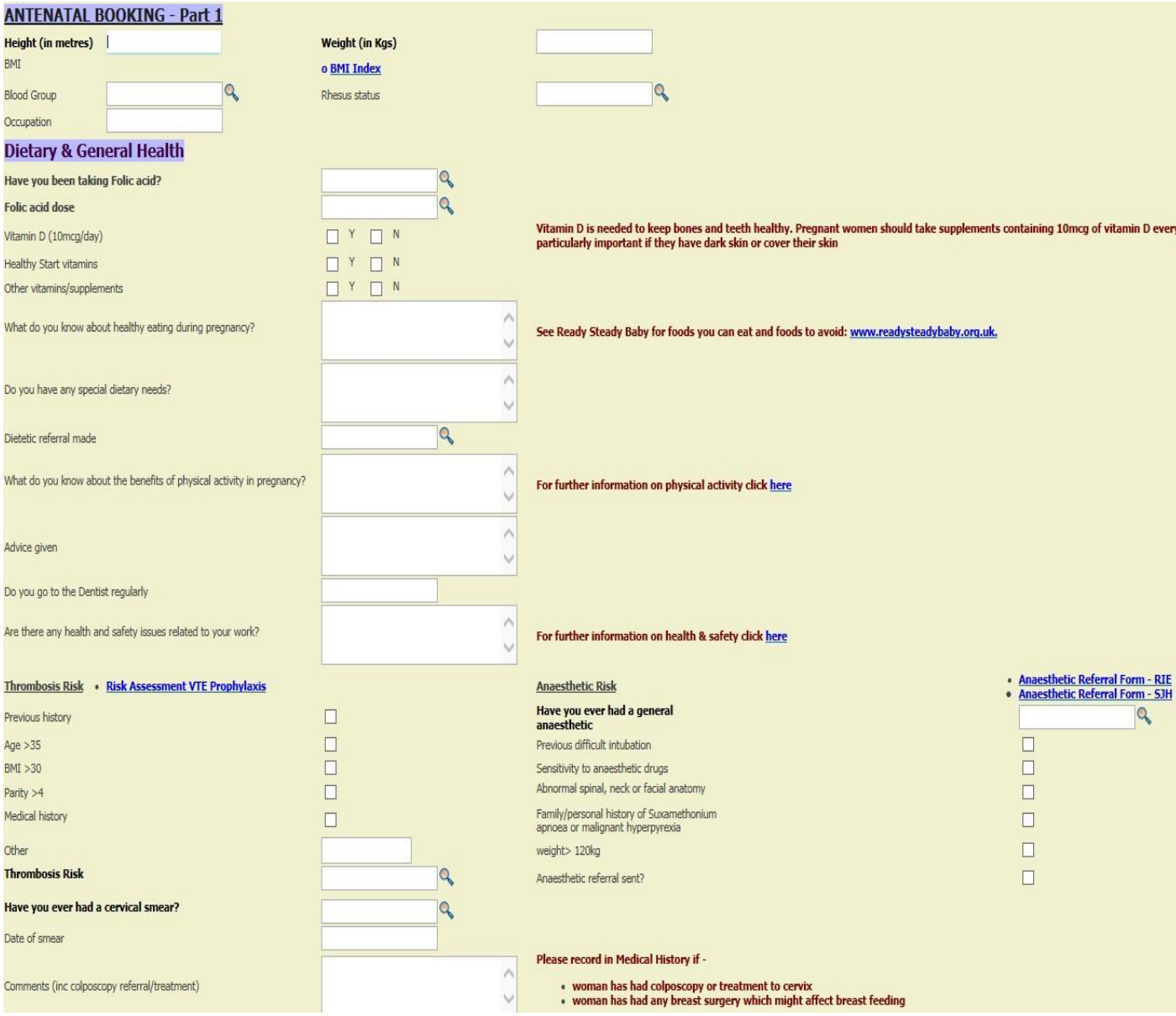
{HYPERTENSION IN PREGNANCY- DIAGNOSIS AND MANAGEMENT NICE CG 107}

HIGH RISK- Offer 75mg low dose Aspirin from 12 weeks onwards until 34- 36 weeks

· Hypertensive disease during previous pregnancy
· Chronic kidney disease
· Autoimmune disease (SLE or APS)
· Pre-exisiting Diabetes
· Chronic hypertension

MODERATE RISK- (If 2 or more moderate risk factors)
offer 75mg low dose Aspirin from 12 weeks onwards
until 34-36 weeks · First pregnancy
· Age 40 years or older
· Pregnancy interval more than 10 years
· BMI 35 kg/m_2 or more at first visit
· Family history of pre-ecclampsia
· Multiple pregnancy

Appendix 17 – Electronic Booking Questionnaire



ANTENATAL BOOKING - Part 1

Height (in metres) | **Weight (in Kgs)**

BMI — o BMI Index

Blood Group | Rhesus status

Occupation

Dietary & General Health

Have you been taking Folic acid?

Folic acid dose

Vitamin D (10mcg/day) ☐ Y ☐ N

Healthy Start vitamins ☐ Y ☐ N

Other vitamins/supplements ☐ Y ☐ N

Vitamin D is needed to keep bones and teeth healthy. Pregnant women should take supplements containing 10mcg of vitamin D every particularly important if they have dark skin or cover their skin

What do you know about healthy eating during pregnancy?

See Ready Steady Baby for foods you can eat and foods to avoid: www.readysteadybaby.org.uk.

Do you have any special dietary needs?

Dietetic referral made

What do you know about the benefits of physical activity in pregnancy?

For further information on physical activity click here

Advice given

Do you go to the Dentist regularly

Are there any health and safety issues related to your work?

For further information on health & safety click here

Thrombosis Risk • **Risk Assessment VTE Prophylaxis**

Previous history ☐

Age >35 ☐

BMI >30 ☐

Parity >4 ☐

Medical history ☐

Other

Thrombosis Risk

Have you ever had a cervical smear?

Date of smear

Comments (inc colposcopy referral/treatment)

Anaesthetic Risk

- **Anaesthetic Referral Form - RIE**
- **Anaesthetic Referral Form - SJH**

Have you ever had a general anaesthetic

Previous difficult intubation ☐

Sensitivity to anaesthetic drugs ☐

Abnormal spinal, neck or facial anatomy ☐

Family/personal history of Suxamethonium apnoea or malignant hyperpyrexia ☐

weight> 120kg ☐

Anaesthetic referral sent? ☐

Please record in Medical History if -

- **woman has had colposcopy or treatment to cervix**
- **woman has had any breast surgery which might affect breast feeding**

Comments (inc colposcopy referral/treatment)

- woman has had colposcopy or treatment to cervix
- woman has had any breast surgery which might affect breast feeding

Next smear due?

Alcohol in Pregnancy

o Problem alcohol use & dependence

o Alcohol Advice during pregnancy

What do you know about drinking alcohol in pregnancy?

The Chief Medical Officer for Scotland's current guidance is to avoid alcohol completely if pregnant or trying to conceive.

One unit of alcohol =

- half a pint of 3.5% beer or lager
- one 25ml measure of spirits.

One small (125ml) glass of average strength (12% wine) contains 1.5 units.

How many units of alcohol did you drink each day before you were pregnant?

How many units of alcohol a day are you drinking now

How many units of alcohol do you drink in an average week

If unsure of units - ask type and amount of alcohol drunk e.g. wine, spirits, beers, alcopops.

If drinking, are you drinking at home, in clubs/pubs

Consider delivering brief intervention. Refer to Alcohol brief interventions antenatal professional pack

Offer patient a brief intervention if pregnant and drinking alcohol ☐ Y ☐ N

Offer patient a brief intervention if prior to pregnancy alcohol consumption above recommended limits ☐ Y ☐ N

o Brief Intervention rationale

Referral for advice on reducing drinking

Consent for follow up

Smoking in Pregnancy

What do you know about smoking in pregnancy?

Have you smoked in the 12 months prior to pregnancy?

CO level

CO Date

Do you or anyone in the household currently smoke? ☐ Y ☐ N

Encourage woman to keep her baby smoke free before and after birth

Are you interested in getting help to stop? ☐

Referral made to smoking cessation service

Consider delivering brief intervention

Smoking Brief Intervention offered ☐ Y ☐ N

Risks on exposure to cigarette smoke whilst pregnant explained ☐

Drug Use

Have you used any street drugs, gas or glue in the last year?

o Blood Borne viruses

If yes - are you currently using any street drugs, gas or glue?

o Flowchart - problem substance use

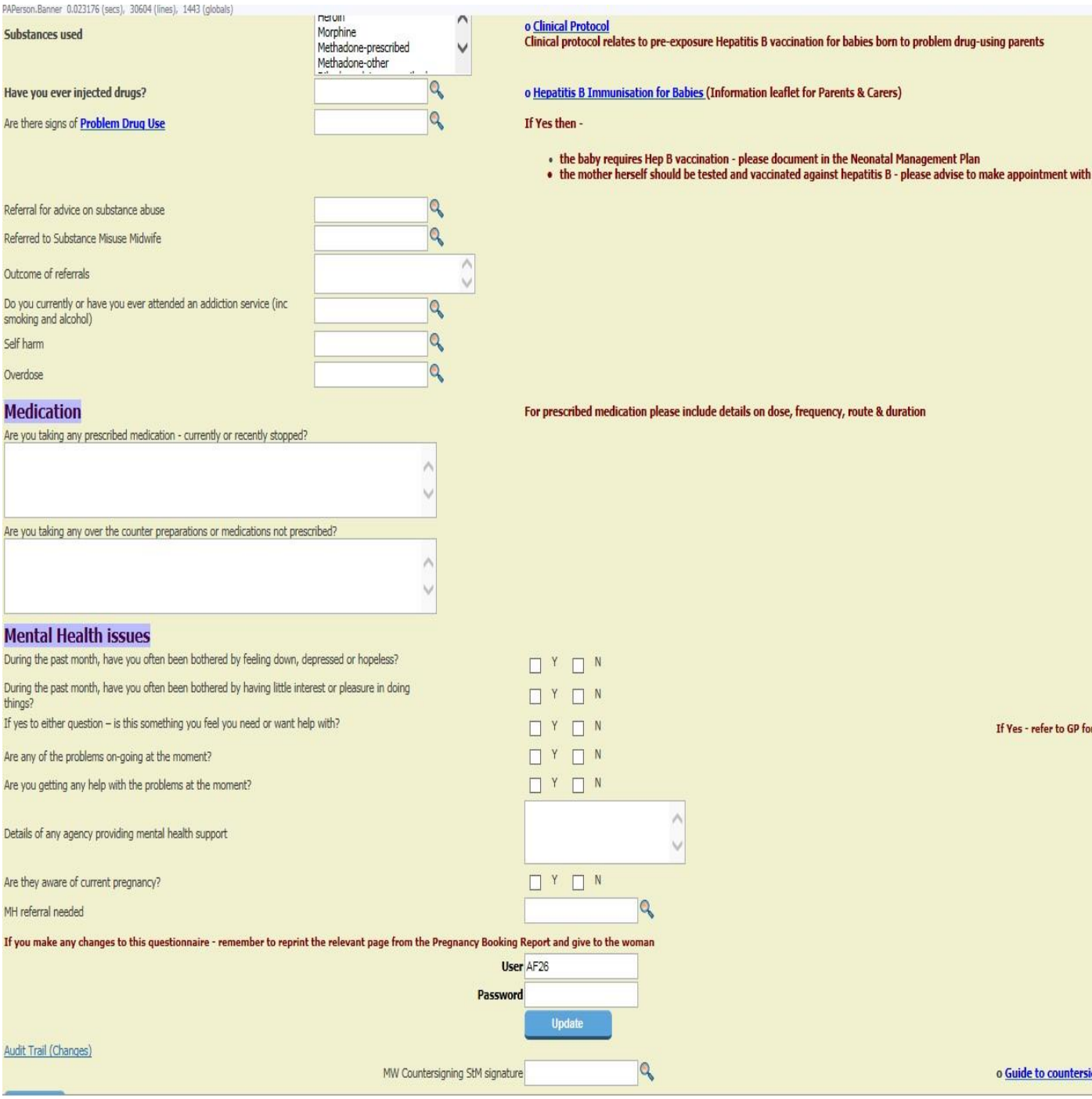
o ALF1 - Antenatal Liaison Form

Substances used

None
Heroin
Morphine
Methadone-prescribed
Methadone-other

o Clinical Protocol

Clinical protocol relates to pre-exposure Hepatitis B vaccination for babies born to problem drug-using parents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Substances used
Heroin
Morphine
Methadone-prescribed
Methadone-other
o Clinical Protocol
Clinical protocol relates to pre-exposure Hepatitis B vaccination for babies born to problem drug-using parents
Have you ever injected drugs?
o Hepatitis B Immunisation for Babies (Information leaflet for Parents & Carers)
Are there signs of Problem Drug Use
If Yes then -
• the baby requires Hep B vaccination - please document in the Neonatal Management Plan
• the mother herself should be tested and vaccinated against hepatitis B - please advise to make appointment with
Referral for advice on substance abuse
Referred to Substance Misuse Midwife
Outcome of referrals
Do you currently or have you ever attended an addiction service (inc smoking and alcohol)
Self harm
Overdose
Medication
For prescribed medication please include details on dose, frequency, route & duration
Are you taking any prescribed medication - currently or recently stopped?
Are you taking any over the counter preparations or medications not prescribed?
Mental Health issues
During the past month, have you often been bothered by feeling down, depressed or hopeless?
Y N
During the past month, have you often been bothered by having little interest or pleasure in doing things?
Y N
If yes to either question – is this something you feel you need or want help with?
Y N
If Yes - refer to GP fo
Are any of the problems on-going at the moment?
Y N
Are you getting any help with the problems at the moment?
Y N
Details of any agency providing mental health support
Are they aware of current pregnancy?
Y N
MH referral needed
If you make any changes to this questionnaire - remember to reprint the relevant page from the Pregnancy Booking Report and give to the woman
User AF26
Password
Update
Audit Trail (Changes)
MW Countersigning StM signature
o Guide to countersi

ANTENATAL BOOKING - Part 2

Home circumstances & Support Needs

Do you have Support Needs

Are you still in school

Are you living in or leaving looked after care services

Do you feel you have someone to support you through the pregnancy

Are you in temporary housing

Do you need further advice on finances benefits or housing issues

Qualifies for Healthy Start Vouchers ☐ Y ☐ N

Referral to income maximisation services ☐ Y ☐ N

Money and debt advice services ☐ Y ☐ N

Financial capability support ☐ Y ☐ N

If you have other children do they live with you

Have you ever needed social work assistance

Have you ever been involved in the Criminal Justice System? ☐ Y ☐ N

Do you have difficulty reading

Any difficulties filling in forms or writing letters

Do you consider yourself to have a physical disability

Do you consider yourself to have a mental disability or learning difficulties

Do you get support or have you ever had support with independent living? ☐ Y ☐ N

Support referral needed

Other support & professionals (social worker, smoking cessation, substance misuse team, etc)

	Contact Details	Job Title
Social work		
Health Visitor/Public Health Nurse		
Other involved workers (family support, learning support worker, guidance teacher etc)		

Other health-related questions

o Women who decline blood products - guidelines

Religious & Cultural Comments

PLEASE DOCUMENT IN SPECIAL FEATURES IF THE WOMAN DECLINES BLOOD PRODUCTS

Is Blood Transfusion acceptable to you ☐

o Checklist for women who may refuse blood products

Comments

Female genital cutting or piercing ☐

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Is Blood Transfusion acceptable to you ☐ o Checklist for women who may refuse blood products

Comments

Female genital cutting or piercing ☐

Comments

Refugee or asylum seeker For health information for refugees or asylum seekers click here

Have you had a full medical examination since arriving in the UK? If 'No' - refer to GP

TB Risk

Family member with TB in last 5 years ☐

Has either parent or any grandparent been born in a high prevalence area ☐ For a list of countries and areas with TB rates of >40 per 100,000 please click here & here

Is family member likely to live for > 3 months in a high prevalence area ☐

Baby requires BCG ☐

State country if Family from country with high prevalence TB

TB Risk

TB Comments If yes to any of these questions please document the need for Neonatal BCG in the Neonatal Mana

CJD or vCJD

Have you ever been notified that you are at increased risk of CJD or vCJD for public health purposes ☐ Y ☐ N

Information for You

Parent Education class - Interested?

Leaflets given

Antenatal education sessions discussed ☐ Y ☐ N

Booked to attend (AN education sessions) ☐ Y ☐ N

Screening tests in pregnancy

Your guide to screening tests during pregnancy ☐ Y ☐ N

Forms

FW8 Maternity exemption form ☐ Y ☐ N

Mat B1 ☐ Y ☐ N

Benefits & Entitlements

Parent's Guide to Money ☐ Y ☐ N

Guide to maternity benefits ☐ Y ☐ N

Pregnancy and work ☐ Y ☐ N

Pregnancy, babycare & breast feeding

Ready Steady Baby ☐ Y ☐ N

information on wearing a car seat belt ☐ Y ☐ N

Reduce the risk of cot death ☐ Y ☐ N

Off to a good start all you need to know about B/F ☐ Y ☐ N

Breast feeding and returning to work ☐ Y ☐ N

Your guide to newborn screening tests ☐ Y ☐ N

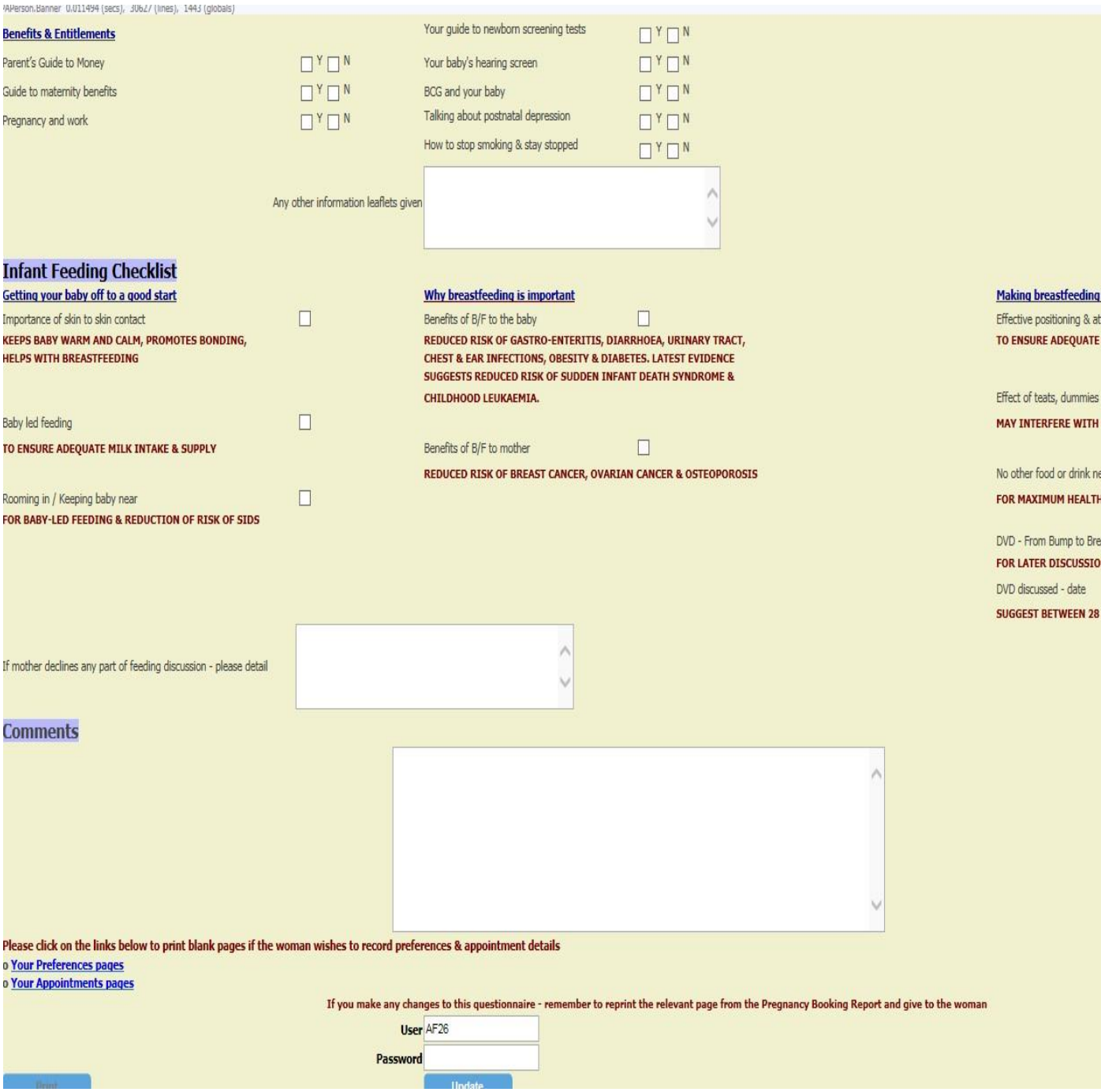
Your baby's hearing screen ☐ Y ☐ N

BCG and your baby ☐ Y ☐ N

Talking about postnatal depression ☐ Y ☐ N

How to stop smoking & stay stopped ☐ Y ☐ N

Any other information leaflets given


Benefits & Entitlements
Parent's Guide to Money Y N
Guide to maternity benefits Y N
Pregnancy and work Y N
Your guide to newborn screening tests Y N
Your baby's hearing screen Y N
BCG and your baby Y N
Talking about postnatal depression Y N
How to stop smoking & stay stopped Y N
Any other information leaflets given
Infant Feeding Checklist
Getting your baby off to a good start
Importance of skin to skin contact
KEEPS BABY WARM AND CALM, PROMOTES BONDING, HELPS WITH BREASTFEEDING
Baby led feeding
TO ENSURE ADEQUATE MILK INTAKE & SUPPLY
Rooming in / Keeping baby near
FOR BABY-LED FEEDING & REDUCTION OF RISK OF SIDS
Why breastfeeding is important
Benefits of B/F to the baby
REDUCED RISK OF GASTRO-ENTERITIS, DIARRHOEA, URINARY TRACT, CHEST & EAR INFECTIONS, OBESITY & DIABETES. LATEST EVIDENCE SUGGESTS REDUCED RISK OF SUDDEN INFANT DEATH SYNDROME & CHILDHOOD LEUKAEMIA.
Benefits of B/F to mother
REDUCED RISK OF BREAST CANCER, OVARIAN CANCER & OSTEOPOROSIS
Making breastfeeding
Effective positioning & at
TO ENSURE ADEQUATE
Effect of teats, dummies
MAY INTERFERE WITH
No other food or drink ne
FOR MAXIMUM HEALTH
DVD - From Bump to Bre
FOR LATER DISCUSSIO
DVD discussed - date
SUGGEST BETWEEN 28
If mother declines any part of feeding discussion - please detail
Comments
Please click on the links below to print blank pages if the woman wishes to record preferences & appointment details
o Your Preferences pages
o Your Appointments pages
If you make any changes to this questionnaire - remember to reprint the relevant page from the Pregnancy Booking Report and give to the woman
User AF26
Password
Update